PANTHER TANKS

GERMAN ARMY AND WAFFEN-SS NORMANDY CAMPAIGN 1944

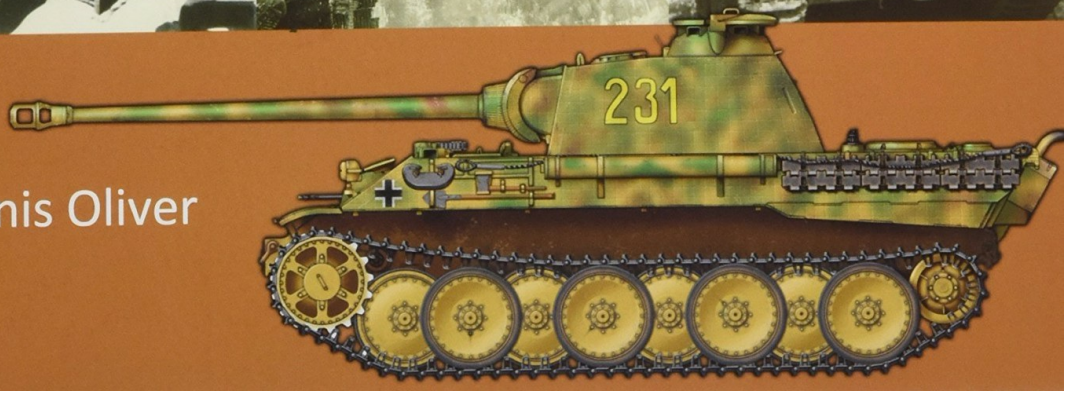
TANK CRAFT

Dennis Oliver

PANTHER TANKS

TANK CRAFT

GERMAN ARMY AND WAFFEN-SS
NORMANDY CAMPAIGN 1944



Dennis Oliver

A Panther ausf A photographed in late August near Falaise. Although it is not possible to identify the unit to which this tank belonged with any certainty, the pattern of Zimmerit, so often seen on vehicles assembled by MNH and the metal hooks used to hold lengths of track which are here welded directly to the turret side, suggest this tank may have served with Panzer-Regiment 24, attached to 116.Panzer-Division.

TankCraft 3

PANTHER TANKS

GERMAN ARMY AND WAFFEN-SS

NORMANDY CAMPAIGN 1944

Dennis Oliver

First published in Great Britain in 2017 by Pen & Sword Military

An imprint of Pen & Sword Books Ltd
47 Church Street, Barnsley, South Yorkshire, S70 2AS
Copyright © Pen & Sword Ltd, 2017
Artwork copyright © Dennis Oliver

ISBN 152 6710 935
eISBN 9 7815 267 1095 6
Mobi ISBN 9 7815 267 1094 9

The right of Dennis Oliver and Oliver Publishing to be identified as the Authors of this work has been asserted by them in accordance with the Copyright, Designs and Patents Act 1988.

A CPI catalogue record for this book is available from the British Library.

All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopying, recording or by any information storage and retrieval system, without permission from the publisher in writing.

Pen & Sword Books Ltd incorporates the Imprints of Pen & Sword Military, Pen & Sword Family History, Pen & Sword Maritime, Pen & Sword Aviation, Pen & Sword Discovery, Wharncliffe Local History, Wharncliffe True Crime, Wharncliffe Transport, Pen & Sword Select, Pen & Sword Military Classics, Leo Cooper, The Praetorian Press, Remember When, Seaforth Publishing and Frontline Publishing.

For a complete list of Pen & Sword titles please contact
PEN & SWORD LIMITED 47 Church Street, Barnsley, South Yorkshire, S70 2AS,
England

E-mail: enquiries@pen-and-sword.co.uk Website: www.pen-and-sword.co.uk

Contents

Introduction
The Normandy Battlefield
The 1944 Panzer-Regiment
The Army Panther Battalions
Camouflage & Markings
Model Showcase
Modelling Products
The Waffen-SS Panther Battalions
Technical Details and Modifications
Product Contact List

INTRODUCTION

The armoured fighting vehicles which had served the German Army throughout the initial Blitzkrieg period had proved more than adequate, allowing the Panzers to storm through Poland and to bring the French Army to its knees in a matter of weeks. With the surrender of France and the evacuation of the British Army from the Continent, Hitler considered the Western Front to be secure and almost immediately ordered his generals to prepare for an invasion of Soviet Russia, expecting that his fast-moving armoured units would meet with the success that they had by now come to regard as routine. The codename for the coming operation would be, as many readers will know, Barbarossa.

The Wehrmacht's knowledge of the Red Army's tank force had been acquired almost completely through their observations of friendly Soviet units in Poland in 1939 and Russian films and newspaper reports. The latter were of course largely propaganda efforts designed to impress the outside world with the sheer number of tanks the Russians would be able to mobilise in the event of war. Perhaps quite deliberately the Soviet government created the impression that their armoured units were composed of light or outdated models and this is what the Germans believed. The very existence of the T-34 medium and KV heavy tanks was concealed and it therefore came as quite a shock when on 23 June 1941, less than 48 hours after the commencement of the invasion, German units encountered the first T-34 and K-V1 and K-V2 tanks. These Russian tanks proved especially deadly to the lighter German models, which made up the bulk of the Panzerwaffe, inflicting heavy casualties on the Czech-built 35(t) tanks of Panzer-Regiment 11 and destroying their supporting anti-tank screen by simply running over the guns and their crews. Elsewhere, on the same day, the Pzkw IV tanks of Panzer-Regiment 1, armed with the 75mm gun, found that they needed to close to ranges of less than 100 metres in order to stop a T-34 or KV. The success of these Soviet types is even more impressive when it is considered that the Germans deliberately avoided tank versus tank actions during the first stages

of the operation (1).

As the campaign dragged on it became all too clear that the Red Army was not beaten and although most of the Soviet tank force had been destroyed within the first two weeks of the commencement of Operation Barbarossa, the Russians always seemed capable of replacing their losses, horrendous as they were. It was obvious that a better armoured, more powerful tank would be needed in the coming months and as early as November 1941 a committee made up of army officers, weapons designers and representatives of the various manufacturers was tasked with finding a solution and immediately set about studying the Russian designs. It is probable, in fact almost certain, that the name Panther was chosen at this time.

Panther tanks of I.Abteilung, Panzer-Regiment 16 of 116.Panzer-Division probably photographed at the Grafenwöhr training grounds in Germany during the late summer of 1944 as indicated by the debris guard over the mantlet of the second tank in line. The battalion's training would not be completed in time for these tanks to take part in the Normandy battles

and their place within the division was filled by I.Abteilung, Panzer-Regiment 24. Although the gun barrel of each tank appears to be painted in the dark grey heat resistant primer used at the assembly plants, some attempt has been made to cover them with camouflage paint, possibly Rotbraun. At far left is a copy of the *Panther-Fibel*, an illustrated manual issued to Panther crews from 1944.

Notes

1. A basic principle of the concept of Blitzkrieg was that armoured units would intentionally bypass enemy strongpoints, avoiding the attritional battles that were sure to ensue, penetrating deep into the enemy's rear, causing as much havoc and confusion as possible. To this end, heavy armament was thought to be necessary only when obstacles such as concrete bunkers were encountered. This system had worked well in Poland and seen phenomenal success in France. Russia would, however, prove to be a different matter.

Within weeks the firm of Daimler-Benz together with Maschinenfabrik Augsberg-Nümburg (MAN) had been contracted to begin work on prototypes for the hull and suspension of a tank in the 30 tonne class. As the main armament chosen was the Rheinmetall-Borsig 7.5cm L/70 gun, that company had also been commissioned to build the turret.

By early May 1942 a number of prototype vehicles had been demonstrated to Hitler who initially favoured the Daimler-Benz design but was persuaded to chose the vehicle submitted by MAN after the Army's representatives pointed out that the silhouette of the T-34 and that of the Daimler-Benz Panther design were almost identical (1). Hitler's agreement, however, came with the stipulation that the frontal armour be increased from 60 to 80 millimetres, a figure which he later demanded be further increased to 100 millimetres. This seemingly insignificant adjustment necessitated a complete redesign of the Panther project and it was not until August 1942 that MAN had produced two new prototypes which were designated VI and V2. The latter, after testing and some modification, was finally accepted as the production design.

Many readers will be familiar with the German term Ausführung, commonly abbreviated to ausf, which when referring to an armoured vehicle means a production model or sub-model. The first tanks to enter production were named Panzerkampfwagen V Panther ausführung A with this designation being changed to ausführung D in January 1943 when assembly was commenced.

The subsequent model, which entered production in August 1943, adopted the ausführung A designation. By March 1944 the first of the much improved ausführung G models had left the factory.

The first Panthers went into combat in July 1943 with Panzer-Abteilung 51 and Panzer-Abteilung 52 during Operation Zitadelle and provided the Wehrmacht with a tank combining the effectiveness of the sloped armour of the T-34 with a powerful main gun.

The development and testing phase had however been conducted in haste with important decisions made and then altered seemingly on a whim. The increase in weight from the original specification alone was enough to ensure that the early tanks suffered serious technical problems, including engine fires which had been caused by overheating. Although continuous improvements and modifications were made during the production of the model D and major changes incorporated into the model A later model G, many of these complications were never completely eliminated.

By the end of 1943, as new tanks left the production lines, battalions taken from Panzer-Regiment 1, Panzer-Regiment 2, Panzer-Regiment 23, Panzer-Regiment 31, SS-Panzer-Regiment 1 and SS- Panzer-Regiment 2 had been converted to Panthers and returned to their parent formations. In June 1944, when the Allies landed in Normandy, over 300 of these tanks were with operational units in the West.

A Panther ausf A of I. Abteilung, SS-Panzer-Regiment 1 photographed just prior to or during the early days of the Normandy campaign. This tank is also shown and discussed further on page 24 of the illustration section.

Notes

1. Interestingly a number of field commanders, including Heinz Guderian, had originally suggested that German industry simply make an exact copy of the T34. Although many accounts claim that Hitler was loathe to imitate the characteristics of a tank, regardless of its merits, which had been designed by the Russians, the concern over the similarity of the Soviet tank and the Daimler-Benz design was almost certainly due to the very likely possibility of friendly fire casualties.

THE NORMANDY BATTLEFIELD

CHERBOURG
Fort du Roule
Valognes
Montebourg
Varreville
Ste. Colombe
Barneville
Ste. Mare Eglise
St. Sauveur
Carentan
La Haye du Puits
Lessay
Periers
Isigny
Tievieres
Lisan
Airel
Marigny
St. Lô
Coutances
St. Gilles
Tessy Sur Vire
Granville
Villedieu
Brecey
Avranches
Pontaubault
Dol
St. Hilaire du Harcouet
Mortain
Domfront
Le Beny Bocage
Vire
Conde
Villers-Bocage
Caumont
Tilly-sur-Seulles
Bayeux
CAEN
Douvres
Falaise
Flers
Potigny
St. Pierre
Argences
Cabourg
Lisieux
Chambois
Argentan
Grandchamp
Point du Hoc
Vierville
St. Laurent
Bessin
Arromanches
Courseulles
Lion-sur-Mer
LE HAVRE
Deauville
Villers Sur Mer
Dieppe
Abbeville
Amiens
Lille
Dunkirk
Calais
Boulogne
Ostend
1.SS
(Antwerp)
15.Armee
2
ROUEN
Le Havre
Elbeuf
Louviers
Evreux
Vernon
Pontoise
Compiegne
Mantes
PARIS
116
XLVII Pz Korps
21
12.SS
Dreux
I SS-Pz Korps
OB WEST
Pz.Lehr
7.Armee
Alencon
Mayenne
Laval
Chartres
Etamps
Fontainbleau
Chateaudun
Pithiviers
Le Mans
Orleans
Chateau Gantier
Loudeac
Rennes
Vitre
Lorient
Vannes
Angers
St. Nazaire
Nantes
Tours
17.SS
BREST
St. Malo
Avranches
Mortain
Argentan
St. Hilaire du Harcouet
Domfront

Units are show in the approximate positions they occupied on the evening of 5 June 1944. Stationed in the south of France were 11.Panzer-Division near Bordeaux, 2.SS-Panzer-Division north of Toulouse and 9.Panzer-Division outside Avignon. The remnants of 9.SS-Panzer-Division and 10.SS-Panzer-Division were still in the East acting as an operational reserve for Heeresgruppe Nordukraine. As can be seen from the map, the tanks of 21.Panzer-Division alone were within striking distance of the Normandy beaches.

The map above shows the area of north-western France over which the battles of June, July and August were fought and, inset, the invasion beaches and area immediately inland. The importance of the city of Caen, at the centre of a network of roads and waterways, is obvious. Outside the city, to the south-west, toward Villiers-Bocage, is Hill 112. The Germans regarded this piece of high ground, with its clear view to the coast, as the key to the battlefield. The most important events of the campaign, as they related to the Panzer units involved, particularly those equipped with the Panther, are set out below. Further information is included in the section detailing the individual regiments.

***6 June**. British, Canadian and American troops land on the Normandy beaches as part of Operation Overlord. Throughout the early morning hours, while the beaches are stormed, sporadic fighting takes place inland and although 21.Panzer-Division, the only armoured formation close to the coast, is officially put on alert at 6.00am, the first tanks would not move off for another three hours. As the Allied landings are taking place OKW transfers 12.SS-Panzer-Division from its operational reserve to Rommel's Heeresgruppe B. By 10.00am a battlegroup from the Hitlerjugend division is in action near Buron, some 6 kilometres north-west of Caen. The burden of most of the fighting on this first day falls on the five infantry divisions manning the coastal defences, which, although undermanned and often isolated, give a good account of themselves. During the day elements of 12.SS-Panzer-Division come into contact with the Canadians heading towards Carpiquet airfield and manage to hold them up. At 5.30pm the tanks of Panzer-Regiment 22 begin their counterattack towards Biéville, just 5 kilometres from the coast. Earlier, at 5.00pm, the Panthers of Panzer-Regiment 6 which had been loaded onto railway*

cars for shipment to Poland are ordered to return to Normandy. By 8.00pm infantry of 21.Panzer-Division reach the coast at Lion-sur-Mer but are almost immediately surrounded. Behind them, to the south, the supporting tanks of Panzer-Regiment 22 are held up at Biéville and Périers. By midnight the Allies have landed over 130,000 men with their equipment and supporting armour. Although the defensive effort was at first indecisive and at times ineffective, the town of Caen remains in German hands as the day ends. The invasion plan had assumed that Caen would be captured on the first day and the failure to so would prove costly for the British and Canadians who would not secure the town until mid-July after heavy losses in both men and equipment. Another first-day objective, Carpiquet airfield, was also denied to the Allies.

7 June. *The British resume their efforts to capture Caen but are hampered not only by the German defenders but the congestion on the invasion beaches which prevents their reserves from moving forward. Between Hérouvillette and Longueval, less than 5 kilometres from the coast, an attack by 4.Kompanie of Panzer-Regiment 22 meets with initial success but is eventually halted by naval gunfire. The Germans are again able to prevent the Canadians from taking Carpiquet, this time pushing the Allies back to the village of Buron, over 5 kilometres from their objective. In a battle fought for the most part in darkness, units of 12.SS-Panzer-Division manage to stop a British advance near Franqueville, despite the absence of the Panzer regiment's Panthers which are stranded on the east bank of the Orne due to a lack of fuel.*

8 June. *The Panthers of I.Abteilung, SS-Panzer-Regiment 12 go into action for the first time at Bretteville-L'Orgueilleuse, a small town on the Caen-Bayeux road. The Canadians claim that twelve Panthers are destroyed in the attempt to take L'Orgueilleuse although Jochen Peiper, the regimental commander, claims that a single tank was knocked out as it travelled along the main street. On this day the British and Americans link up north of Bayeux*

9 June. *By early morning elements of 2.Panzer-Division, including Panzer-Regiment 3, begin moving towards the Normandy front. During the day the Luftwaffe makes a rare contribution, first over Lion-sur-Mer and also in an attack on the Orne bridges. By the end of the day the tanks of Panzer-Lehr-Division are in position north-west of Caen preparing to reinforce 21.Panzer-Division and 12.SS-Panzer-Division.*

10 June. *The Panthers of Panzer-Regiment 6, attached to Panzer-Lehr-Division, are sent into action for the first time. A single platoon of four tanks, supported by a battery of 88mm anti-aircraft guns, halts an enemy advance north of Tilly-sur-Seulles although the British are able to occupy the town that night.*

11 June. *A determined German counterattack drives the British units out of Tilly-sur-Seulles and also survives a subsequent Allied counterthrust. An assault by Canadian tanks near Le Mesnil-Patry, almost exactly halfway between Tilly-sur-Seulles and Caen, is beaten back.*

12 June. *Despite local German successes, British and US Army units are able to link up near Carentan creating a continuous front. Further south, the Americans capture Livry about 20 kilometres east of St Lô.*

13 June. *During the early morning, elements of British 7th Armoured Division reach Villers-Bocage, less than 20 kilometres to the south-west of Caen. At 9.00am they are surprised by a platoon of Tiger I tanks from schwere SS-Panzer-Abteilung 101 and although the Germans eventually withdraw, the British are badly mauled, losing fourteen tanks and two anti-tank guns with a number of halftracks and lorries. This, and other setbacks suffered on the same day, force the British to temporarily halt their attempts to capture Caen. The fighting around Villiers-Bocage also sees the first use of 2.Panzer-Division in the Normandy campaign.*

14 June. *British units withdraw from Villiers-Bocage towards Caumont. On the same day US troops complete the capture of Carentan.*

15 June. *The Panthers of I.Abteilung, Panzer-Regiment 6 attempt to retake the village of Hottot where the men of Panzergrenadier-Regiment 902 are surrounded. The attack is called off in the afternoon and the tanks directed towards Tilly-sur-Suelles.*

16 June. *Kampfgruppe von Luck, made up from elements of 21.Panzer-Division including 4.Kompanie, Panzer-Regiment 22 and Sturmgeschütz-Abteilung 200, attacks St Honorine on the Caen-Carentan road about 5 kilometres south of Arromanches.*

18 June. *The first tanks of Panzer-Regiment 3 arrive at the front having been forced to travel much of the distance on their own tracks.*

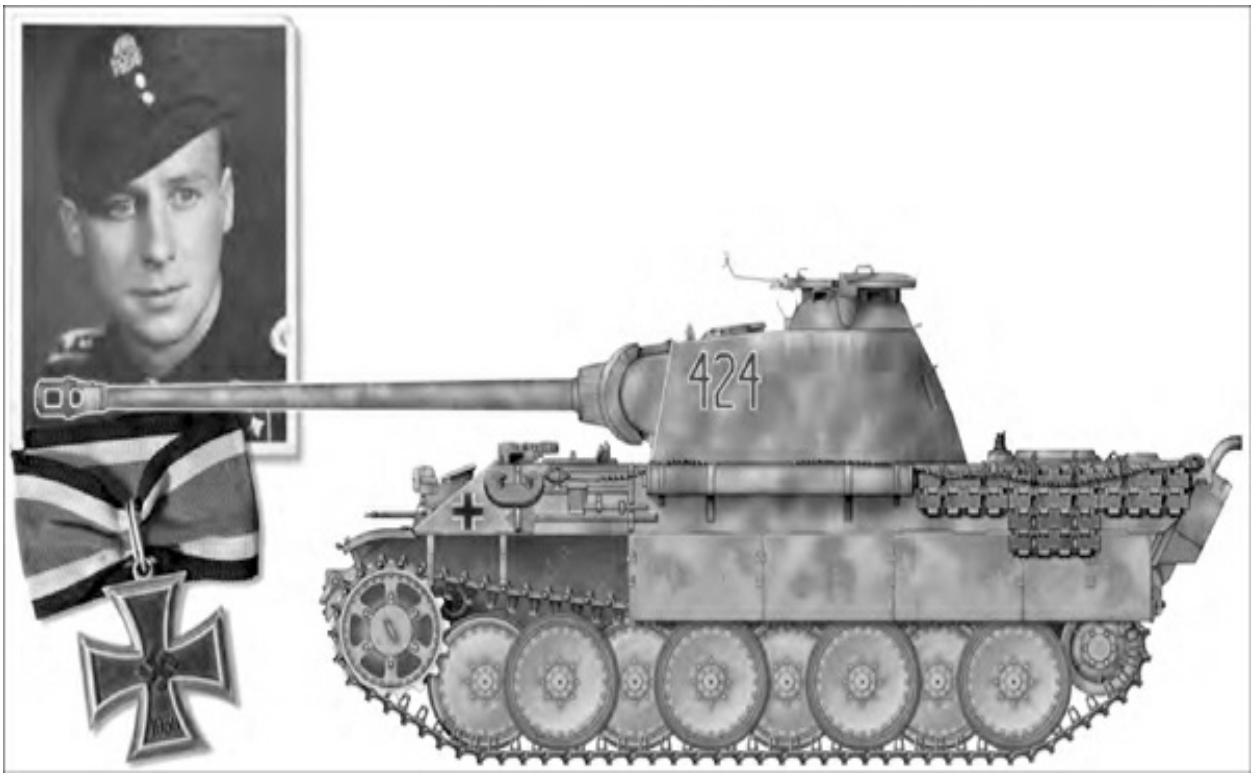
19 June. *Over the next 48 hours the tanks of Panzer-Regiment 3 and Panzer Regiment 6 are involved in heavy fighting around Tilly-sur-Seulles.*

25 June. *The British commence Operation Epsom, an attempt to outflank the German defenders of Caen and secure the city. After two days of costly fighting Caen remains in German hands although the Allies have gained a foothold on the south bank of the Odon river.*

26 June. *The Panthers of I.Abteilung, Panzer-Regiment 3 with Panzergrenadiers of the Hitlerjugend division launch an attack to the west of Tilly-sur-Seulles.*

27 June. *During the fighting which takes place over the next two days, I.Abteilung of Panzer-Regiment 3 claims the destruction of fifty-five enemy tanks and fifteen anti-tank guns around Tilly-sur-Seulles and in the counterattack aimed at Caumont-L'Evente. Elsewhere, 4.Kompanie, Panzer-Regiment 22 and I.Abteilung, SS-Panzer-Regiment 12 mount an attack on Allied positions between Mouen and Cheux. The British 11th Armoured Division overruns much of Hill 112, the highest point on the Normandy battlefield, south-west of Caen. Later that day a determined counterattack is made by tanks of SS-Panzer-Regiment 12 and although beaten back, the summit is still controlled by the Germans as night falls.*

Heavily camouflaged Panther ausf G tanks of II.Abteilung, Panzer-Regiment 33 said to have been photographed on their way to the Normandy front. The regiment, with its parent formation, 9.Panzer-Division, was based in the south of France near Avignon when the invasion commenced and although ordered to join 7.Armee on 27 July the division's refit and training was not complete.



One of the best-known Panther commanders of the Normandy campaign, SS-Unterscharführer Ernst Barkmann, was attached to 4.Kompanie, SS-Panzer-Regiment 2. Barkmann's crew claimed their first victory on 8 July, knocking out an American Sherman tank during an action near St Lô and during the following week were credited with the destruction of a further five tanks. For his part in an engagement that took place on 27 July, Barkmann was awarded the Knight's Cross in recognition of his bravery and leadership. However, the German account of what became known as the fight at 'Barkmann's Corner', where a single Panther was able to hold up an armoured column, destroying more than half the enemy's tanks, bears little resemblance to Allied battle histories and detailed situation reports and was almost certainly exaggerated in an effort to boost German morale. Barkmann's tank on that day was Panther 424, shown here, which had been in repair for several days.

29 June. *SS-Panzer-Regiment 9 mounts a major counterattack along the left bank of the Odon River capturing Grainville-sur-Odon but failing to reach its main objective of Cheux. Anticipating a strong counterattack, all British armoured units around Hill 112 withdraw, allowing the Germans to occupy the area without loss.*

1 July. *Oberbefehlshaber West decides to slowly abandon Caen seeing the occupation of the city as no longer pivotal to the defence of Normandy. The armoured units around Caen will be gradually transferred to the west to meet the expected American offensive. Of course the British and Canadians know nothing of this and Caen*

remains the focus of their attention.

2 July.*Panzer-Lehr-Division is withdrawn from the frontline and moved towards the south-east in anticipation of a major American attack.*

8 July. *A Panther of 4.Kompanie, SS-Panzer-Regiment 2 commanded by SS-Unterscharführer Ernst Barkmann destroys an American Sherman tank near Noyers-Bocage in the regiment's first action in Normandy. The Panthers are subsequently beaten back by heavy artillery fire.*

9 July. *Tanks of SS-Panzer-Regiment 2 halt an American advance near Périers, north-west of St Lô. British and Canadian units fight their way into Caen and manage to secure the northern suburbs although the Germans stubbornly cling to the southern half.*

10 July. *After their success of the previous day, the tanks of SS-Panzer-Regiment 2 move forward in a counterattack aimed at the American positions at St. Sebastion-de-Raids, two kilometres outside Périers. A major British offensive captures Hill 112 after heavy fighting.*

11 July. *A German counterattack made by units of 9.SS-Panzer-Division drives the British from the summit of Hill 112. Twenty Panthers of Panzer-Regiment 6 attack the Allied positions along the Vire-Taute canal and although a number of tanks reach their objectives the attack is broken up at midday by Allied fighter-bombers. On the same day US troops enter St. Lô. After fighting almost continuously from the first day of the campaign, 12.SS-Panzer-Division is withdrawn to refit.*

16 July. *A Kampfgruppe made up from Panthers of Panzer-Regiment 3 and elements of Panzer-Lehr-Division under Oberst Traugott Köhn, the commander of the tank regiment, launch a counterattack to the west of Villiers-Bocage. The Germans are beaten back with heavy loss, including Oberst Köhn who is killed. Tanks of SS-Panzer-Regiment 9 capture Bougy, north of Evrecy, destroying forty-eight British tanks in the process.*

18 July. *The Panthers of SS-Panzer-Regiment 1 go into action for the first time near Bouguébus. In a single day of fighting the British and Canadians lose 100 tanks. The Panthers of SS-Panzer-Regiment 9, with Panzergrenadiers of 10.SS-Panzer-Division in support, regain the area between St. Martin, St. André and May-sur-Orne, south of Caen.*

19 July. *Canadian units clear the southern suburbs of Caen. British tanks enter Bras and Hubert-Folie on the outskirts of the town.*

20 July. *The tanks of 1.SS-Panzer-Division launch a major attack west of Bouguébus, parallel to the Caen-Falaise road. On the same day a group of disaffected German officers make an attempt on Hitler's life.*

22 July. *The Panthers of 2.Kompanie of SS-Panzer-Regiment 9 are ordered to occupy May-sur-Orne but are fed into the attack piecemeal, losing three Panthers which could not be recovered.*

24 July. *A company of Panthers of Panzer-Regiment 3, supported by Panzerjäger-Abteilung 38, attack towards St Martin-de-Fontenay, about 5 kilometres south of Caen. Panzer-Lehr-Division reports that seven serviceable tanks are available to meet an expected American attack.*

25 July. *The US Army's Operation Cobra begins, preceded by an intense aerial bombardment, and meets with almost immediate success. On the same day the Canadians attack German positions south of Caen. Employing tenacious resistance followed by a series of skilful counterattacks, the Germans manage to stall the Canadian offensive by the evening of the first day. All available tanks of SS-Panzer-Regiment 1 are employed in a counterattack towards Tilly-la-Campagne on the Caen-Falaise road.*

28 July. *American units capture Coutances, about 40 kilometres west of Saint-Lô, but are held up outside the town by elements of 2.SS-Panzer-Division and 17.SS-Panzergrenadier-Division.*

29 July. *A Kampfgruppe made up of two companies of Panzergrenadiers and the twenty serviceable tanks of Panzer-*

Regiment 3 launch an attack towards La Denisière, a small crossroads town on the Villebaudon-St Lô road, in an attempt to link up with Panzer-Lehr-Division and 2.SS-Panzer-Division. By the end of the day, after heavy fighting, the third and fourth companies of SS-Panzer-Regiment 2 are forced to abandon their tanks.

30 July. *The Panzer-Regiment 3 Kampfgruppe reaches its objective of La Denisière but is quickly surrounded.*

1 August. *Just seven tanks of Panzer-Regiment 3 are able to break out of La Denisière and fight their way back to the German lines at Moyon.*

2 August. *Panthers of 2.Kompanie, SS-Panzer-Regiment 9 attack British positions at Monchauvet, south-east of St Lô. After destroying five Cromwells they are cut off and only narrowly escape.*

3 August. *Units of 9.SS-Panzer-Division take the village of Presles, north-east of Vire.*

4 August. *A Kampfgruppe, made up principally from SS-Panzer-Regiment 9, cuts off a British breakthrough near Chênedollé, destroying thirty-nine enemy tanks. Hill 112 is occupied by British units after the German defenders had abandoned their positions. With the evacuation of Caen the hill has no strategic significance.*

6 August. *Just before midnight, Operation Lüttich, a major assault intended to blunt the US Army's Cobra offensive and retake Avranches, begins. Despite early tactical gains, including the capture of Mortain, the attack bogs down amidst a determined American counterattack supported by scores of Allied fighter-bombers.*

8 August. *The battlegroups of 2.SS-Panzer-Division, which had advanced past Mortain towards Saint-Hilaire-du-Harcouët, find themselves in danger of encirclement. On the same day the British begin a major offensive codenamed Totalise which sees fresh Canadian and Polish units attacking towards Falaise in an effort to trap the German units now being pushed eastwards by the Americans. During the late afternoon the Americans occupy Le Mans, the*

headquarters of SS-Oberst-Gruppenführer Paul Hausser's 7.Armee.

9 August. *Returning to the front, the Panthers of I.Abteilung, SS-Panzer-Regiment 12 are immediately thrown into an attack against Allied positions at Point 104 north-east of Falaise. Supported by the last Tigers of schwere SS-Panzer-Abteilung 101, they claim the destruction of twenty-eight Canadian tanks without loss.*

10 August. *Near Alençon, north of Le Mans, the tanks of Panzer-Regiment 33 go into action for the first time. Units of 12.SS-Panzer-Division take Point 195, 3 kilometres south-east of Quesnay.*

11 August. *In an attempt to intercept the German units withdrawing after Operation Lüttich, British units mount an attack towards Moncy on the Vire-Saint-Germain-du-Crioult road and towards Mont de Cerisy. Meeting fierce resistance, the attack bogs down at Le Val after advancing just 800 metres.*

12 August. *Panzer-Regiment 16 reports that just fifteen tanks are ready for immediate operations.*

13 August. *The Kampfgruppe made up of the survivors of Panzer-Lehr-Division leave their positions around Habloville, south of Falaise, and withdraw to an assembly area near Fountainebleu. Elements of 9.SS-Panzer-Division reach Vimoutiers, 30 kilometres east of Falaise, after fighting their way through the Allied positions at Trun. The last German units withdraw from Mortain.*

14 August. *Tanks of SS-Panzer-Regiment 12 halt an Allied advance just north of Falaise but are forced from the defensive positions they have set up by the evening of the next day.*

17 August. *Canadian troops enter Falaise, threatening the German Army in Normandy with encirclement. The following morning the Canadians capture Trun, 10 kilometres east of Falaise on the Argentan-Vimoutiers road.*

18 August. *During the early morning the remaining tanks of Panzer-Regiment 3 are withdrawn from the frontline and move towards St. Lambert, south-east of Villiers-Bocage. That night the last survivors of*

12.SS-Panzer-Division escape the pocket which has been formed around Falaise.

19 August. *Despite a desperate defence, where at one time a single Panther of SS-Panzer-Regiment 2 held up the Allied advance, Polish armoured units link up with US troops at Chambois just south of Mount Ormel as evening approaches. The headquarters of SS-Panzer-Regiment 1, awaiting orders for a counterattack, reports that nineteen tanks are ready for operations.*

20 August. *During the early morning, the remaining tanks of SS-Panzer-Regiment 2 and SS-Panzer-Regiment 9 mount an attack from outside the pocket towards the Polish positions on Mount Ormel. By noon another Kampfgruppe made up of elements from 10.SS-Panzer-Division, 12.SS-Panzer-Division and 116.Panzer-Division manage to break through the Polish front while SS-Panzer-Regiment 9 prevents Canadian reinforcements from reaching the front. Within a few hours approximately 10,000 Germans are able to escape from the Falaise Pocket. The last tanks of SS-Panzer-Regiment 1 withdraw to the east through the St. Lambert-sur-Dives corridor.*

21 August. *During the early evening Polish and Canadian troops meet at Coudehard, north-east of Trun, closing the German escape route for the last time. Any German units not trapped at Falaise are now in headlong retreat towards the Seine.*

25 August. *Paris, the last objective of Operation Overlord, is liberated.*

28 August. *The survivors of Panzer-Regiment 3 reach the Seine with five operational tanks.*

30 August. *The last German troops cross the Seine leaving much of their heavy equipment behind. The battle for Normandy is over.*

Although somewhat unclear, this image is quite rare and I personally have not seen it reproduced previously. The officer standing in the cupola of this Befehlspanzerwagen Panther ausf A is the commander of SS-Panzer-Regiment 12, SS-Obersturmbannführer Max Wünsche. Photographed in March 1944 during a training exercise, as evidenced by the white umpire's band on the cap of the officer sitting in front of Wünsche, this tank has the pistol ports on the turret side, here hanging open, and on the turret rear which were dropped from production by the end of 1943 together with the horizontally-mounted jack which was replaced by a vertical arrangement between February and the end of March 1944. If the date of this photograph is correct, these features would suggest that this tank is one of seven allocated to the regiment in February.

THE 1944 PANZER REGIMENT

All units of the German Army were structured according to orders, issued by Oberkommando des Heeres, the high command of the Army (1). Disseminated on a regular basis these orders governed all aspects of military life. When organisational changes were called for these orders were accompanied by Kriegstärkenachweisung, today usually abbreviated to KstN, which were comprehensive tables of establishment showing the official composition of a unit in detail, listing the exact number of personnel and type of equipment from armoured vehicles to small arms. Each Kriegstärkenachweisung was numbered and dated, the date being all-important to our study as new orders often retained the number of the document they replaced. Not all these records survived the war, however, our knowledge of those affecting the Panzer battalions is quite extensive.

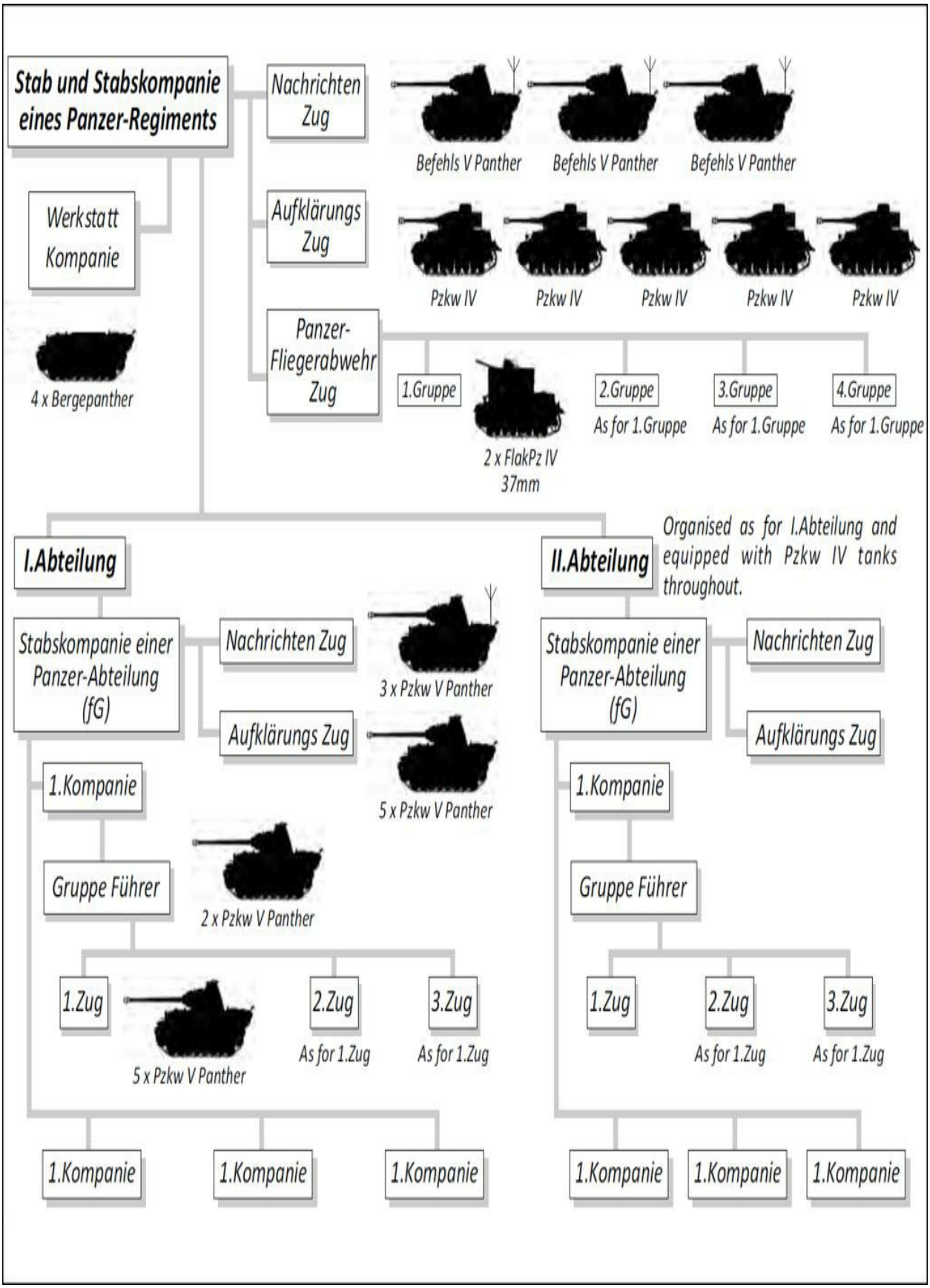
The first Panther battalion, formed on 9 January 1943, comprised a staff element and staff company with a Nachrichten Zug of three Pzkw IV tanks and an Aufklärungs Zug equipped with five Panthers (2). The battalion contained three companies, each with a command troop of two Panthers and four Züge or platoons. In November 1943 a new set of organisational charts were issued with plans that each Panzer division would eventually contain an organic Panther-Abteilung. These new orders replaced the five Pzkw IV tanks of the staff company with Panthers while the organisation of the battalion remained essentially unchanged.

By December 1943, as tanks became available, further battalions had been formed and sent to the Eastern Front. A number of these were not authorised to contain a fourth platoon in each company and so fielded just seventy-six tanks in place of the ninety-six allowed under the January and November instructions and the Kriegstärkenachweisung issued in April 1944 would formalise this arrangement for all battalions.

The orders introduced on 1 April 1944 called for a regimental headquarters which contained a Nachrichten Zug, or platoon, of three Befehlspanzerwagen V Panther command tanks, an Aufklärungs Zug of five Pzkw IV tanks and, a

completely new inclusion, a Panzer-Fliegerabwehrzug of eight Flakpanzer IV self-propelled 37mm anti-aircraft guns. The new year also saw the introduction of the frei Gliederung concept whereby transport and supply elements were removed from companies and concentrated at battalion level as the Versorgungs-Kompanien (3).

PANZER-REGIMENT APRIL 1944


Stab und Stabskompanie eines Panzer-Regiments
Nachrichten Zug
Befehls V Panther
Befehls V Panther
Befehls V Panther
Werkstatt Kompanie
Aufklärungs Zug
Pzkw IV
Pzkw IV
Pzkw IV
Pzkw IV
Pzkw IV
4 x Bergepanther
Panzer-Fliegerabwehr Zug
1.Gruppe
2 x FlakPz IV 37mm
2.Gruppe
As for 1.Gruppe
3.Gruppe
As for 1.Gruppe
4.Gruppe
As for 1.Gruppe
I.Abteilung
Organised as for I.Abteilung and equipped with Pzkw IV tanks throughout.
II.Abteilung
Stabskompanie einer Panzer-Abteilung (fG)
Nachrichten Zug
3 x Pzkw V Panther
Aufklärungs Zug
5 x Pzkw V Panther
1.Kompanie
Gruppe Führer
2 x Pzkw V Panther
1.Zug
5 x Pzkw V Panther
2.Zug
As for 1.Zug
3.Zug
As for 1.Zug
1.Kompanie
1.Kompanie
1.Kompanie
Stabskompanie einer Panzer-Abteilung (fG)
Nachrichten Zug
Aufklärungs Zug
1.Kompanie
Gruppe Führer
1.Zug
2.Zug
As for 1.Zug
3.Zug
As for 1.Zug
1.Kompanie
1.Kompanie
1.Kompanie

Some regiments had their Panthers concentrated in II.Abteilung contary to the official orders and these are mentioned on the following pages. Many German military terms are difficult to translate into English and they are presented here in their original form as they appeared on the official orders.

Notes

1. Referred to officially, in German, as Allgemeine Heeresmitteilungen.

2. Respectively, signals and reconnaissance platoons.

3. Translated literally as free organisation, in the military context the phrase describes a freeing up of the administrative and resources burden involved when each company organised its own supply and transport services. The system was not extended to the army as a whole until August 1944.

THE ARMY PANTHER BATTALIONS

The German Army fought the battles for Normandy with eight armoured battalions equipped with the Pzkw V Panther tank. Including the tanks on hand on 6 June 1944 and replacements received in the following weeks and months, approximately 650 Pzkw V Panther tanks were committed to the fighting, allocated to four Army and four Waffen-SS battalions. By the end of July 197 of those tanks had been destroyed or captured and in the retreat of August, a further 41 were lost. Following are brief histories of the Panther units and although some details pre-date our study they are taken into account to give the reader a more complete picture of the development and history of these formations. I have included the Panther battalion of the Grossdeutschland division which took no part in the fighting but was in France on 6 June 1944 at the Mailly-le-camp training centre. Similarly I have not listed Panzer-Regiment 15 of 11.Panzer-Division which was serving in France at this time but much further to the south.

PANZER-REGIMENT GROSSDEUTSCHLAND

A Pzkw V Panther ausf A of 2.Kompanie, Panzer-Regiment Grossdeutschland photographed in France in 1944, probably during late Spring. Note the debris guard over the mantlet of the main gun and that the tube for the gun cleaning rods has been moved from its usual position on the hull side to the hull rear, both field modifications. This tank has the horizontally-mounted jack and twin engine exhaust manifold cooling pipes indicating that this vehicle was assembled in January or February 1944.

Raised on 13 January 1943 this regiment was assigned to the elite Panzergrenadier-Division-Grossdeutschland.

From the commencement of the invasion of the Soviet Union in June 1941 this division served in the east and the regiment is included here as I.Abteilung was in France completing its conversion to the Panther when the Allies landed in Normandy. By May 1944 the battalion had been allocated a total of seventy-eight new tanks. Attached to 116.Panzer-Division it was initially anticipated that the battalion would take part in the Normandy

fighting but it was transferred to the east in June, coming under the command of 6.Panzer-Division and finally returning to its parent formation by the end of the year. An example of one of the battalion's Panthers, as they appeared in France during the summer of 1944, is shown in the camouflage and marking section on page 23.

SCHWERE PANZER-ABTEILUNG 654

Formed in September 1943 from Panzerjäger-Abteilung 654 this battalion was the first unit to be equipped with the Jagdpanther tank destroyer. On 15 June 1944, although still under strength, the battalion was sent to the Normandy front, expecting that new vehicles would arrive in the combat area once they were available (1).

In addition to the tank destroyers allocated to the three companies, the battalion headquarters staff had three Befehlspanzerwagen V Panther command tanks on hand in June and an example of one of these tanks is shown in the illustration section on page 23.

It is almost certain that two of these tanks, and perhaps the third, were lost in Normandy. This battalion and the other Jagdpanther units which served in the west will be covered in a future title in this series.

Notes

1. This may have included only the headquarters and 2.Kompanie and it is likely that as few as twelve Jagdpanthers took part in the Normandy fighting.

PANZER-REGIMENT 3

Formed on 15 October 1943 with two battalions, each comprising four companies, the regiment was attached to 2.Panzer-Division. On 10 May 1942, I.Abteilung was detached and renamed III.Abteilung, Panzer-Regiment 33. In March 1943 a new I.Abteilung was raised but very soon after transferred from the regiment to form schwere Panzer-Abteilung 507, an independent Tiger unit (1). By June the battalion had reverted to its original title of I.Abteilung, Panzer-Regiment 3 and began its conversion to the Panther and by the end of February 1944, had returned to 2.Panzer-Division.

The division had been stationed in France since the winter of 1943/44 and at

the time of the D-Day landings was almost at full strength, reporting just prior to the invasion that I.Abteilung, Panzer-Regiment 3 had seventy-nine serviceable Panthers on hand. Although a number of damaged vehicles would be returned from the workshops and repair depots during the fighting in Normandy, the regiment would not receive any new replacement vehicles and was soon badly depleted.

Ordered to the front from Amiens on Friday, 9 June 1944, the forward units of 2.Panzer-Division were engaged in combat as early as the following Monday, although the complete division would not be in the frontline for another week.

Crucially, the missing units included all the tanks of Panzer-Regiment 3 and most of the self-propelled guns of Artillerie-Regiment 74, the division's most powerful elements, which had been forced to detour via Paris undertaking most of the journey on their own tracks. When the tanks finally arrived many were in need of repair and a general lack of spare parts would hamper the regiment throughout the campaign.

During the next weeks the division operated in the area to the south-west of Rouen and on 26 June was preparing an attack to take the crossroads town of Caumont -L'Eventé, between St. Lô and Villiers-Bocage, just as the British launched a major offensive codenamed Epsom, breaking through the front held by Panzer-Lehr-Division near Tilly-sur-Seulles. The Panther battalion of Panzer-Regiment 3 was immediately detached to support 12.SS-Panzer-Division in its attempt to restore the front and by the end of the month claimed to have destroyed over fifty enemy tanks.

However, these local victories did little to change the overall picture and with half the regiment's tanks occupied elsewhere, the original 2.Panzer-Division operation to retake Caumont -L'Eventé was doomed to failure.

On 16 July the Panthers of I.Abteilung, supported by elements of Panzer-Lehr-Division, took part in a counterattack against British units that had broken through to the west of Villiers-Bocage. Although the Germans achieved some initial successes, they were eventually driven back after losing several tanks and a number of men including Oberst Traugott Köhn, the

regiment’s commander.

A Pzkw V Panther ausf A of 3.Kompanie, Panzer-Regiment 3 photographed in August 1944. The unit insignia of 2.Panzer-Division is just visible on the turret side. This tank is shown and discussed further in the Camouflage and Markings section on page 20.

Notes

1. The Tiger battalion was eventually formed around a cadre from Panzer-Regiment 3 and part of its story can be read in *Tiger I and Tiger II Tanks, German Army and Waffen-SS, Eastern Front 1944,* the first book in this series.

Disabled near Broiuze, south-east of Falaise, in mid-August 1944 this tank is one of just fifty Panther ausf A models assembled by Demag before the company switched to the production of the Bergepanther in February 1944. The identification with Panzer-Regiment 3 and the tank's unusual markings are discussed on page 21.

On 21 July most of the division began withdrawing, to be gradually replaced by the inexperienced 326.Infanterie-Division, leaving the tanks of Panzer-Regiment 3 at the front and until 27 July were they were employed wherever they were needed. The Panther battalion supplied a company of tanks which formed a Kampfgruppe with the division's anti-tank battalion (1).

During the first weeks of August, the division took part in Operation Lüttich, the counterattack on US positions around Mortain. All available assets were concentrated in a Kampfgruppe led by Oberst Hans Schacke, commanding officer of the division's Panzergrenadier-Regiment 304. This large battle group contained the first battalion of Oberst Schacke's regiment supported by the fifteen serviceable Jagdpanzer IV tank destroyers of the division's Panzerjäger-Abteilung 38 and I.Abteilung, Panzer-Regiment 24, which had

been detached from the relatively fresh 116.Panzer-Division and had perhaps sixty operational Panthers on hand. Oberst Schacke's battle group also contained elements of II.Abteilung, Panzer-Regiment 3, equipped with a number of Pzkw IV tanks and the infantrymen of Panzergrenadier-Regiment 2. Added to this were two battle groups made up of troops from 1.SS-Panzer-Division which would come under Schacke's command when they reached the front. This armoured battlegroup was the strongest unit available for the offensive and was able to make some gains, the Panthers reaching St. Barthelemy, just north of Mortain. However, the strong American response, especially their overwhelming superiority in the air, was able to halt the Panzers and then push them back and by the end of the battle the regiment was reduced to almost half its authorised strength (2). Among the casualties was Major Ferdinand Schneider-Kostalski who had replaced Oberst Köhn as the commanding officer of the Panzerregiment.

The fighting around Mortain and the subsequent withdrawal had exhausted the division and on 19 August 1944 the survivors were ordered to retreat from the area around Falaise through St Lambertsur-Dives and reached their destination before noon of the following day. By 28 August the last units of 2.Panzer-Division crossed the Seine, Panzer-Regiment 3 reporting that just five tanks were left.

Notes

1. This tank company was probably formed around the thirteen fully operational Panthers on hand at the time.

2. By this time it was not unusual to see German tank crews simply abandon their vehicles at the first sight of Allied fighter-bombers.

TANK STRENGTH. I.ABTEILUNG, PANZER-REGIMENT 3

April		May		June		July		August	
Allocated	On Hand	Allocated	On Hand	Allocated	On Hand	Allocated	On Hand	Allocated	On Hand
0	79*	0	79	0	79	0	59**	0	0

** 16 in short-term repair, 11 in long-term repair. 6 of these tanks were Panzerbefehlswagen V Panthers*

*** My estimate based on the reported loss of 20 Panthers as total write-offs by 8 July*

Accurate figures for August 1944 are not available

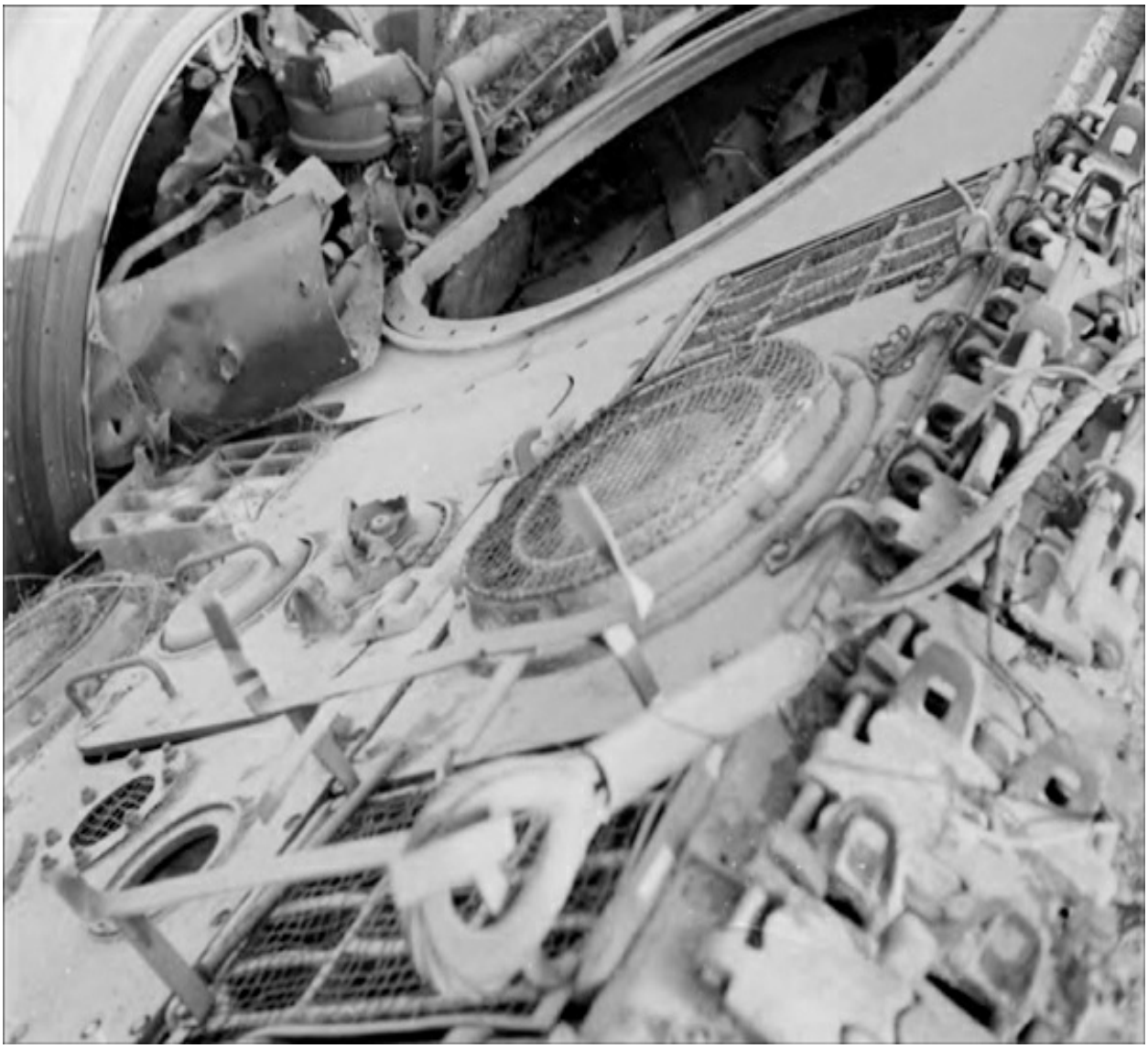
Tanks of I.Abteilung, Panzer-Regiment 6 photographed just prior to the Normandy landings. The Zimmerit coating of the Panther at right is typical of vehicles produced by Daimler-Benz as many of the tanks of this battalion seem to have been. Note the elongated rain guard for the binocular gun sight and the armoured plug fitted to the outermost aperture indicating that this tank was retrofitted with the newer monocular sight. The Panther depicted below is also shown in the Camouflage and Markings section on page19.

PANZER-REGIMENT 6

Formed on 1 September 1939, the very first day of the war, with two battalions of four companies each, the regiment was attached to 3.Panzer-Division. On 6 August 1943, I.Abteilung began its conversion to Panthers and in January 1944 was temporarily attached to Panzer-Lehr-Division as the first battalion of Panzer-Regiment 130. There is some argument as to whether the battalion was ever renamed and did in any case rejoin its original parent formation in December 1944 as I.Abteilung, Panzer-Regiment 6. During the initial stages of the Normandy fighting the Tiger II tanks and demolition vehicles of Panzer Kompanie (Funklenk) 316 were under the control of the battalion commander.

Just prior to the Normandy landings Panzer-Lehr-Division was probably the strongest formation in the German army reporting on 1 June 1944 that eightynine Panthers, ninety-nine Pzkw IV tanks, thirty-one Jagdpanzer IV tank destroyers and ten Sturmgeschütz III assault guns were available for immediate deployment. However, in early June the Panther battalion, the division’s real striking power, was detached and sent to the Eastern Front despite the very real threat of an Allied landing. Although the tanks never left France the first vehicles were not able to return to the regiment until 10 June and could not be deployed until the following day. The division was engaged against the British around Caen until it was gradually withdrawn between 26 June and 5 July to be replaced by 276.Infanterie Division. For the remainder of June and early July the division was rested and re-equipped and during this time the Panzer regiment received eight new Panthers as replacements.

A Panther ausf A of 2.Kompanie, Panzer-Regiment 6 said to have been disabled by USAAF fighter-bombers. The number 215 is just visible on the turret side. Note that the rack used to hold lengths of spare track links has been, quite neatly, removed from the hull side. The luggage bracket on the right-hand side of the hull rear is still in place, although slightly damaged, and among the pieces of track lying on the hull deck is a spare wheel, another common feature of these tanks.



Another disabled Panther ausf A of Panzer-Regiment 6 showing the luggage rack and its method of construction. These racks were common but not universal and those of 2.Kompanie seem to have been slightly smaller than the racks fitted to other Panthers.

TANK STRENGTH. I.ABTEILUNG, PANZER-REGIMENT 6

April		May		June		July		August	
Allocated	On Hand	Allocated	On Hand	Allocated	On Hand	Allocated	On Hand	Allocated	On Hand
0	85*	1**	86***	0	86*	0	8	0	0
* A further 3 Panthers remained with the headquarters of Panzer-Lehr-Regiment 130									
** Returned from 7.Kompanie, Panzer-Lehr-Regiment 130									
*** 3 in short term repair									
Accurate figures for August 1944 are not available									

By 11 July Panzer-Lehr-Division was back at the front attacking US Army positions around le Désert, north-west of Vire, and despite some initial successes the German forces were eventually forced to withdraw.

On 25 July, the Americans launched a major offensive codenamed Cobra which was preceded by a massive aerial bombardment, much of which fell around the positions of the Panzer-Lehr-Division. There are several conflicting accounts of the damage that the bombing was able to inflict on the German defenders with the division's commander, Generalleutnant Fritz Bayerlein, later claiming that the division and its subordinated units together lost over 2,000 men in just 48 hours with fifty percent of the casualties being directly attributable to the bombing. However, this seems to have been contradicted by the commander of II.Abteilung, Panzer-Regiment 130, who not only stated that none of his Pzkw IV tanks were lost, but that very few of the regiment's tanks actually destroyed (1).

On 5 August Panzer-Lehr-Division was ordered to withdraw the from the front and move to Alençon, north of Le Mans, leaving behind a Kampfgruppe under Oberst Paul Freiherr von Hauser made up of a weak company of

II.Abteilung, Panzer-Regiment 130 and the division's remaining artillery (2).

With the failure of the Mortain counterattack and renew British pressure around Caen the situation became increasingly desperate and on 12 August, when Oberst Hauser was ordered to withdraw his Kampfgruppe towards Fontainbleu, Bayerlein ordered what remained of his division to follow. A battle group consisting of a company of tanks, including the surviving Panthers of I.Abteilung, with a howitzer battery and parts of Panzergrenadier-Lehr-Regiment 902 remained behind and on Sunday, 20 August, together with remnants of 12.SS-Panzer-Division, managed to break out of the Falaise Pocket.

By the following Tuesday the Panzer Regiment reported that just ten Panthers and ten Pzkw IV tanks were operational.

Panther ausf A of Panzer-Regiment 6. The rods attached to the turret's side towards the front were also a common feature of many of the battalion's tanks although I can offer no

explanation as to their use or function.

Notes

1. Bayerlein was an experienced soldier and it is difficult to dismiss his account entirely. Further, Chester Wilmot, the veteran BBC war correspondent accompanying the lead American units, recalled seeing the roads lined with disabled vehicles all bearing the Panzer-Lehr unit insignia.
2. At the time Oberst Hauser was the commander of Panzergrenadier-Lehr-Regiment 901.

PANZER-REGIMENT 24

A Panther ausf G of 4.Kompanie, Panzer-Regiment 24 photographed in August 1944. Identifying features of the tanks of this unit were the spare wheels on the turret sides and the container for the gun cleaning rods which has been moved to the the rear hull. This vehicle is also shown on page 17 of the Camouflage and Markings section..

A Panther ausf G of Panzer-Regiment 24 photograhed much earlier in the campaign. Note the two jerry cans fitted between the engine exhausts and the rear stowage boxes. The circle marking on the turret rear access hatch identifies 2.Kompanie.

Raised on 3 December 1941 from Reiter-Regiment 2, Reiter-Regiment 22 and Panzer-Abteilung 101 and attached to 24.Panzer-Division, this formation was completely destroyed at Stalingrad. The regiment was reformed with two, foursquadron battalions in February 1943 and received a third battalion

in April, formed from Panzer-Abteilung 127 (1). The first battalion, which had converted to Panthers in July 1943, at first operated as an independent reserve with LVIII Reserve Panzerkorps in Russia.

On 6 June 1944, the Panther battalion of Panzer-Regiment 16 of 116.Panzer-Division was being re-equipped in Germany and it was originally intended that I.Abteilung of Panzer-Regiment Grossdeutschland, training on their new Panthers at Truppenübungsplatz Maillyle-Camp near Reims, should be attached to the regiment as a replacement (2). However, before 116.Panzer Division could be committed to the front, the Grossdeutscland Panthers were returned to the east and on 19 July 1944, I.Abteilung, Panzer Regiment 24 took their place. This battalion, commanded by Major Kuno von Meyer, an experienced tank officer who had led the regiment's II.Abteilung in Russia, had however only just received its Panthers and was still conducting platoon-sized exercises as late as the end of June and would not arrive at the Normandy front until Monday, 26 July 1944. When US army units broke through the German lines near St. Lô on the following Wednesday this battalion was one of the strongest armoured formations available to the Germans in Normandy and was chosen to play a major role in Operation Lüttich, the counterattack at Mortain. With sixty combat-ready Panthers the battalion was attached to Kampfgruppe Schake, an adhoc battle group made up principally of units from 2.Panzer-Division, although at first the commander of 116.Panzer-Division, Generallleutnant Graf von Schwerin, refused to relinquish his tanks (3). Despite the shaky start the Panthers performed well, reaching Le Mesnil-Adelee, some 10 kilometres to the northwest of Mortain, before they were stopped by the determined American defence. With the abandonment of Operation Lüttich the division was moved to Alençon, 30 kilometres north of Le Mans, and from 20 August the remaining tanks took part in a series of attacks in an attempt to maintain an escape corridor for the German troops trapped in what by then was known as the Falaise Pocket.

By 22 August, I.Abteilung, Panzer-Regiment 24 had been reduced to eleven serviceable tanks.

Notes

1. As the regiment had been raised in the main from cavalry units its companies were referred to as squadrons.

2. The facility at Mailly-le-Camp was one of eleven large training centres maintained by the German Army in occupied France. Many of the armoured units that fought in Normandy had passed through there.

3. Schwerin's legendary insubordination was only matched by his ability to escape punishment. Implicated in the July plot to kill Hitler and suspected of scheming to surrender his command to the Americans he was promoted and transferred to Italy.

TANK STRENGTH. I.ABTEILUNG, PANZER-REGIMENT 24

April		May		June		July		August	
Allocated	On Hand	Allocated	On Hand	Allocated	On Hand	Allocated	On Hand	Allocated	On Hand
5	78*	-	79**	71	75	0	76	0	0
** Includes as many as 2 Bergepanther recovery vehicles*									
*** Includes 3 Panzerbefehlswagen V command tanks*									
*** Includes 3 Panzerbefehlswagen V. 19 Panthers were in long- and short-term repair. The allocation of*									
71 tanks between 5 and 7 June is something of a mystery and they may never have been delivered									
Accurate figures for August 1944 are not available									

PANZER-REGIMENT 33

Tanks of II.Abteilung, Panzer-Regiment 33 on their way to the front in July 1944. Note the armoured covers for the periscopes of the commander's cast cupola and the method of attaching the ring for the anti-aircraft machine gun. Both Panthers shown in our photograph below are ausf G models.

Formed by renaming Panzer-Regiment Conze, a training unit, on 2 February 1940 and assigned to 9.Panzer-Division. The regiment was originally made up of two battalions, receiving a third in May 1942 which had been formed from I.Abteilung, Panzer-Regiment 3. On 8 May 1943, III.Abteilung left the regiment to form schwere Panzer-Abteilung 506. In early 1944 the regiment's

II.Abteilung, under Hauptmann Karl Pfannkuche, began its training on the Panther, taking over a number of tanks from 155.Reserve-Panzer-Division (1).

In June 1944, when the Allies landed in Normandy, the bulk of 9.Panzer-Division was near Avignon in the south of France while the Panzer regiment's II.Abteilung was at the Mailly-le-Camp training facility east of Paris, over 500 kilometres to the north. On 27 July the division was ordered to move towards the invasion Front although the Panther battalion was at that time in the process of returning to its parent formation and had to be rerouted to the north.

Elements of the division began arriving at the front from 4 August and were strung out in a curve north of Le Mans running from Domfront through Alençon to Trun. In the subsequent fighting around Alençon, were the Germans maintain a large fuel store, units of the division were for the most part allocated to other formations and by 15 August the Panther battalion, which had loined the division just over a week earlier, was withdrawn from the front.

Notes

1. The official allocation records indicate that the battalion received a number of tanks as early as January 1944 although most histories have II.Abteilung moving to France in May. It should be remembered that this battalion was used to form one of the first Panther units, Panzer-Abteilung 51, and the January figures may represent a number of tanks retained from earlier allocations. The twenty-four Panthers from 155.Reserve-Panzer-Division were all despatched to the battalion between 23 and 25 April 1944.

TANK STRENGTH. II.ABTEILUNG, PANZER-REGIMENT 33

April		May		June		July		August	
Allocated	On Hand	Allocated	On Hand	Allocated	On Hand	Allocated	On Hand	Allocated	On Hand
24*	24	16**	40	39**	79***	0	79	0	79****

** Taken over from 155.Reserve-Panzer-Division*

*** There is no official record of these tanks having been delivered although the final figures are correct*

**** Includes 3 Panzerbefehlswagen V command tanks*

***** It is almost certain that this figure was submitted at the beginning of the month befor the battalion had been committed to the fighting*

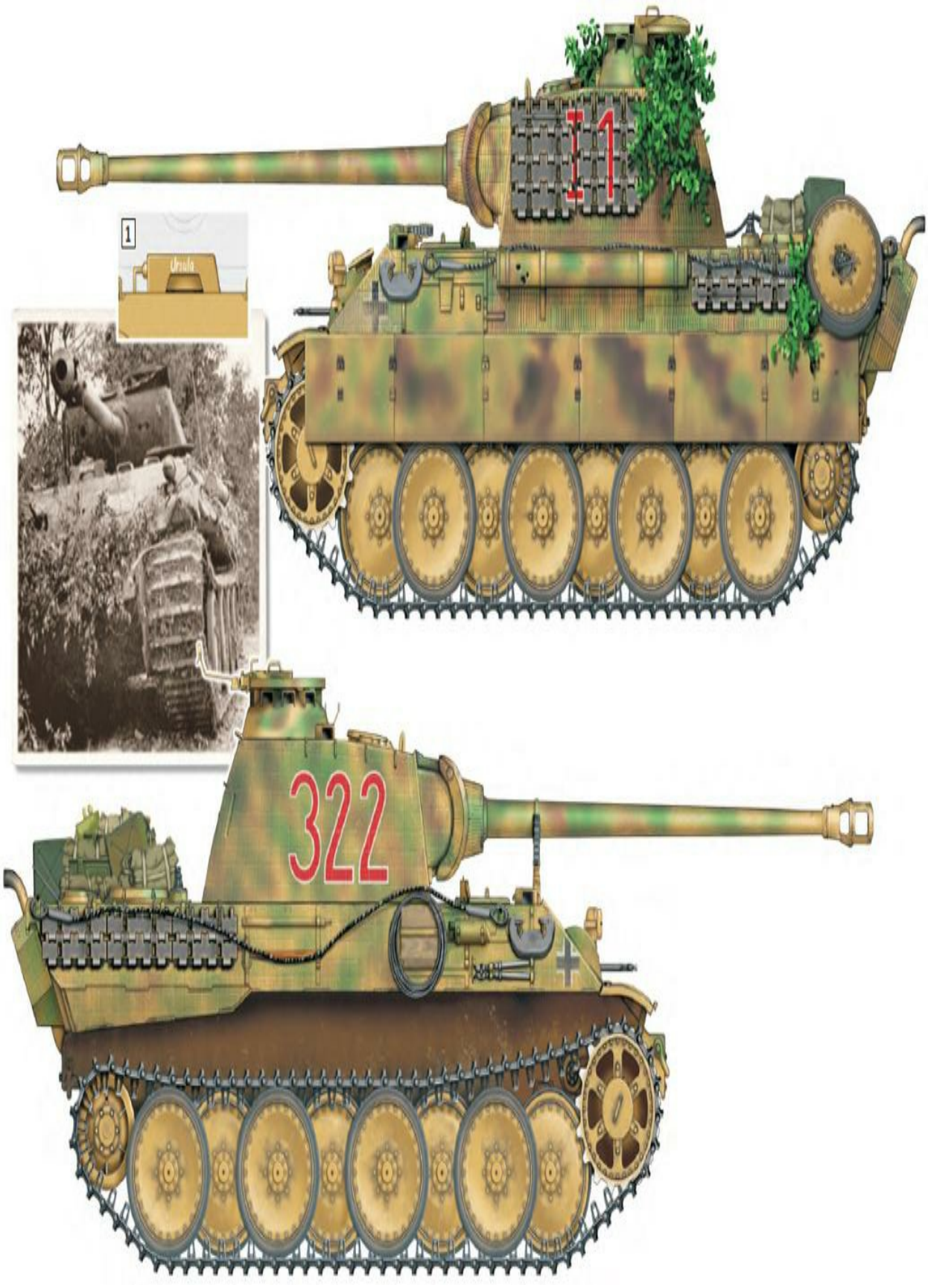
A Panther ausf G of 6.Kompanie, Panzer-Regiment 33. The towing coupling, first incorporated into production with the ausf A model in April 1944 and continued with the ausf G, can be seen here fixed to the round motor access door just under the jack. Note that the sheet metal exhaust covers have also been coated with Zimmerit.

CAMOUFLAGE & MARKINGS

Pzkw V Panther ausf G. 2.Schwadron, Panzer-Regiment 24. An identifying feature of this battalion's tanks was the spare wheel fixed to the turret towards the rear, usually on both sides. The wheels were held in place by three bolts welded to the turret sides. Note also the hooks attached to the top edge of the turret, which were used to hold lengths of spare track, and the two jerry cans held in brackets on the side of each rear stowage box. Only the last two digits of the company number were repeated on the turret rear and the geometric markings shown here on the rear access door probably identified the company.

Pzkw V Panther ausf G. 4.Schwadron, Panzer-Regiment 24. The division's original Panther battalion from Panzer-Regiment 16 was still in training when the Normandy campaign began

and I.Abteilung of Panzer-Regiment 24 was temporarily attached to the division. The tanks continued to carry the unit insignia of their parent formation, 24.Panzer-Division(1) throughout the campaign. The marking was usually displayed on the right side stowage box at the rear (2) as shown here and sometimes at the hull front (3).


1
Ursula
322

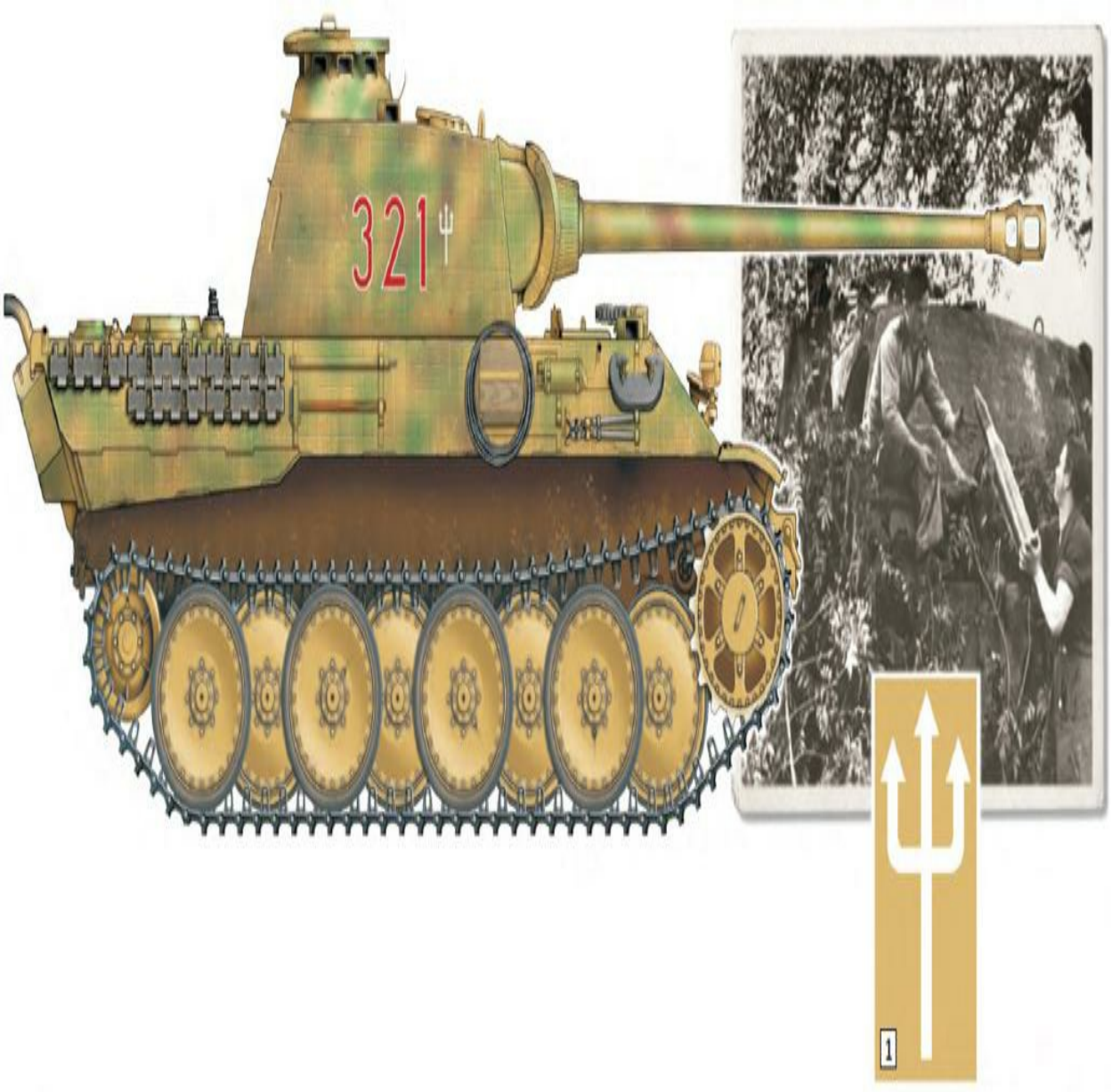
Pzkw V Panther ausf A. Stab, I.Abteilung, Panzer-Regiment 6. Photographed on several occasions throughout the campaign this tank was named (1) as were many, but not all, the Panthers of the battalion. Other names included *Ingrid*, shown in our photograph, *Gerda*, depicted on the following page, *Christel, Elna* and *Helga*. The names were all painted on the gun travel lock as shown here. The company numbers were invariably painted onto the spare tracks when they were carried. This tank was disabled at Les Hauts Vent, north-east of Lisieux, on 12 July 1944.

Other distinctive modifications made to the tanks of this battalion were the spare wheel mounted on a bracket on either the hull side or rear deck, the lengths of track fitted to the turret sides and the hooks that held them in place and the metal tube or rod which was often fed through the teeth of the spare tracks. These modifications and others are discussed further in the technical section and throughout the book.

Pzkw V Panther ausf A. 3.Kompanie, Panzer-Regiment 3. Photographed in early May 1944 when the regiment was en route to France after completing its training in Hungary, this tank is camouflaged in the soft, mottled style employed by the Panther battalion at the time. The large red, outlined white, numbers were a distinctive feature of the tanks of I.Abteilung and were repeated, in the same size and style, on the turret rear. This illustration shows the hooks that were welded to the turret to hold lengths of spare track. Just visible in one of the photographs on which this profile is based is a bracket for a spare wheel fixed to the hull rear on the left hand side.

Pzkw V Panther ausf A. 2.Kompanie, Panzer-Regiment 6. Photographed prior to the invasion this tank is named in the same manner as the Panther depicted on the previous page (1). Another identifying feature of this battalion was the metal bracket on the hull rear deck. These could vary in size between companies and are often shown holding a wooden box, as here.

Pzkw V Panther ausf A. 2.Kompanie, Panzer-Regiment 6. This tank was captured intact and in working order and was shipped to the US at the conclusion of the Normandy campaign were it was extensively tested. I have, however, been unable to discover its ultimate fate. Note that this vehicle is also fitted with the metal bracket shown above. In common with the other panthers of this battalion the large company number was repeated on the turret rear and the Balkenkreuz national insignia was painted between the exhausts.

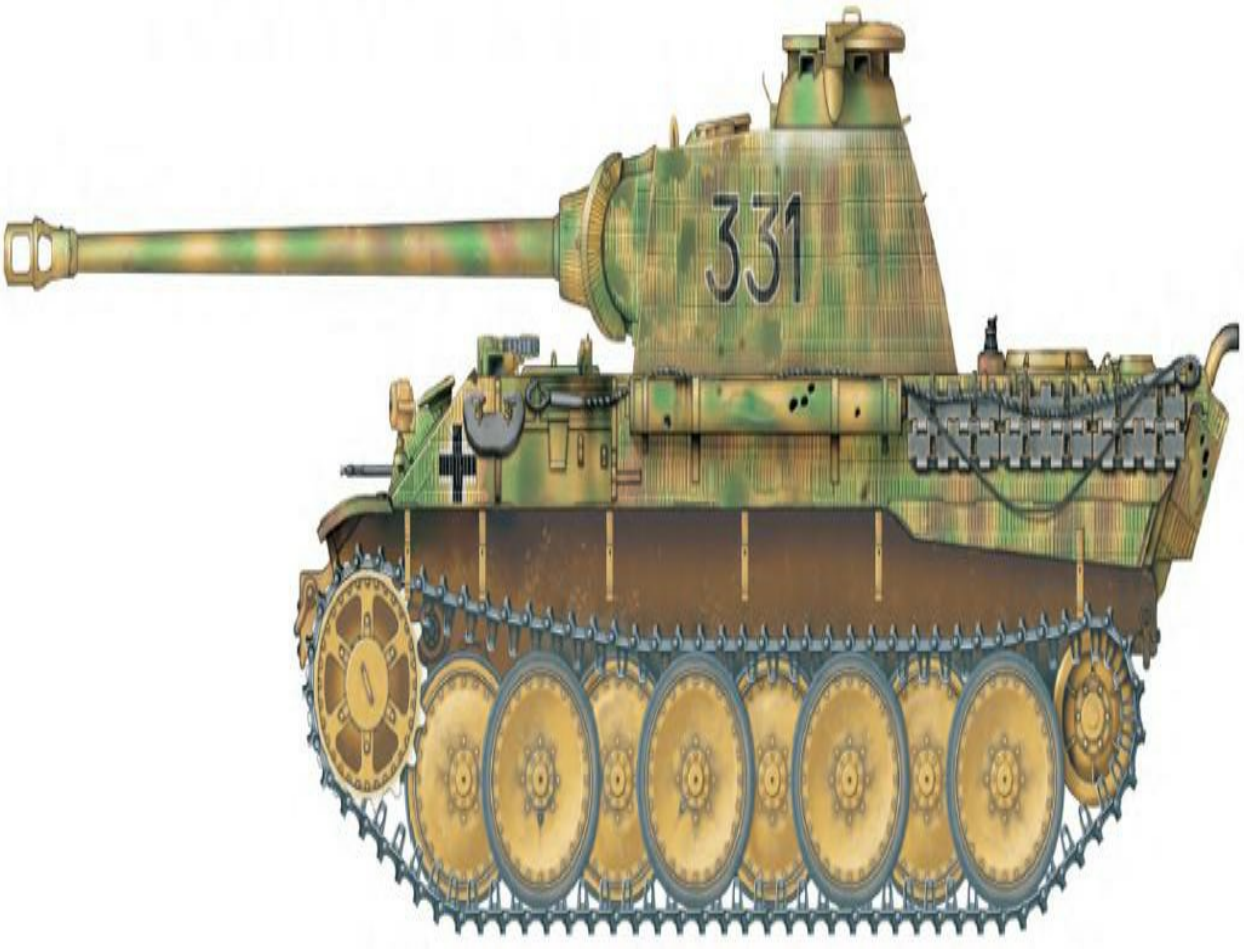


The division's unit insignia can be clearly seen on the turret side above the crewman holding the 7.5cm shell.

Pzkw V Panther ausf A. 2.Kompanie, Panzer-Regiment 3. Many, but not all, the Panther tanks of the regiment's I.Abteilung carried the division's Trident unit insignia on the turret forward of the tank's number as shown here (1). This marking often varied in size, style and exact placement although most very similar. The style of the company number, rendered in red with a white outline, was consistent throughout the battalion.

Pzkw V Panther ausf A. 4.Kompanie, Panzer-Regiment 3. This early production model has the pistol port on the turret side, just behind the number 2, that was dropped from production at the end of December 1943. Note the very unusual application of Zimmerit paste on the first piece of hull Schürzen. It seems that the division's unit insignia was only painted onto the left hand side of the Panther turrets and it is entirely possible that this tank also carried the marking.

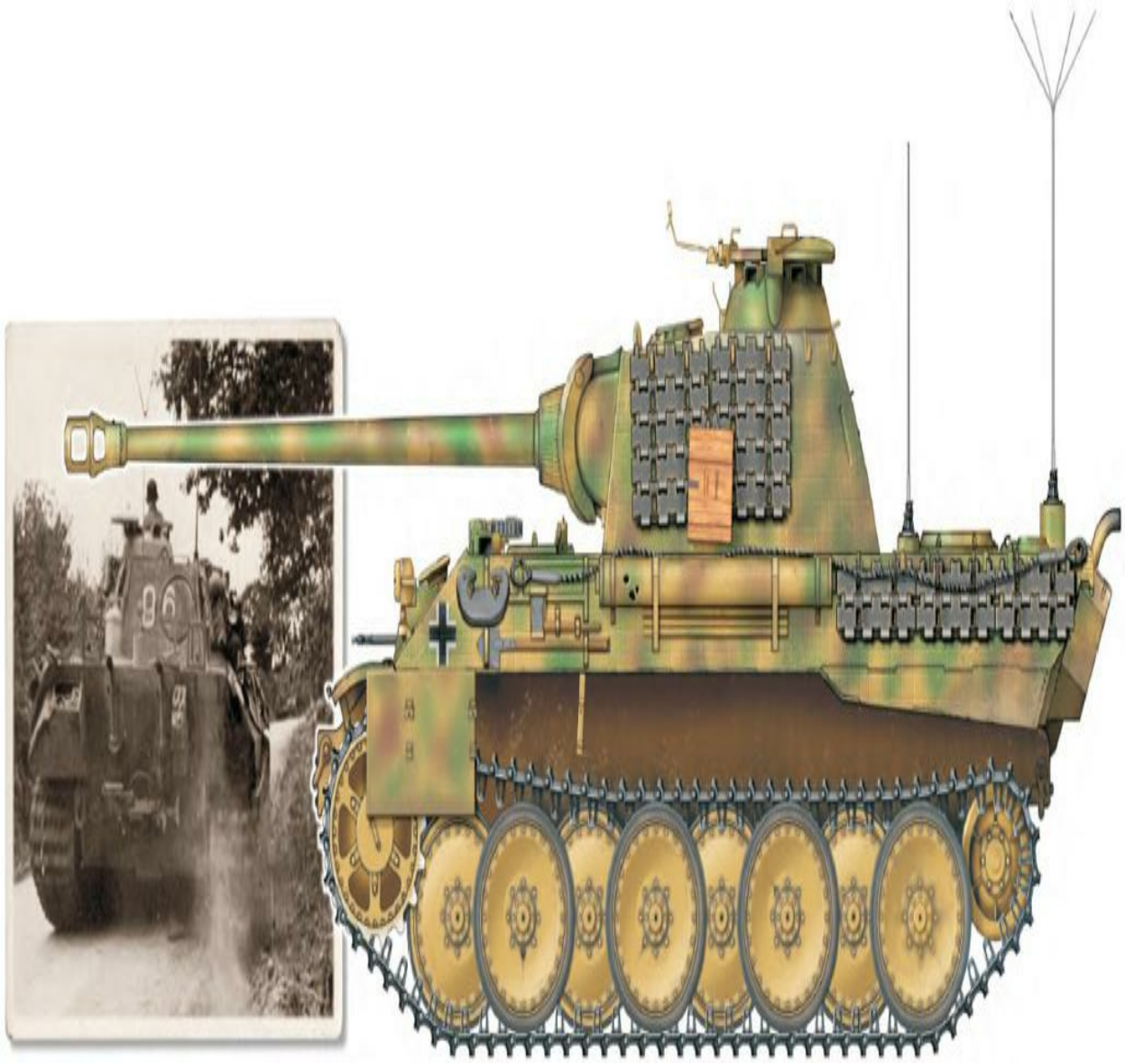
Pzkw V Panther ausf A. Unit unknown, possibly 2.Kompanie, Panzer-Regiment 3. Photographed near Briouze on the Flers-Argentan road this vehicle today resides in a private collection. This Panther ausf A was originally allocated to the battalion headquarters and commanded by Leutnant Emil Graf von Spannocchi, a scion of an old Austrian military family. Historian Frédéric Deprun suggests that Leutnant von Spannocchi's nickname was *Die Schreiben* although I feel that *Der Schreiber*, the scribe, would be more correct. Either could, however, account for the personal emblem (1). At some time the tank was passed to 2.Kompanie and taken over by Leutnant Strobl, the commander of the company's third platoon and hurriedly renumbered. As indicated by the method of application of the Zimmerit paste, this tank is one of only fifty Panthers manufactured by DEMAG before that company moved to the production of Bergepanther recovery vehicles.



Pzkw V Panther ausf A. Unit unknown, possibly 3.Kompanie, SS-Panzer-Regiment 2. Said to have been photographed near Falaise in August 1944, the identification of this battered vehicle with SS-Panzer-Regiment 2 is based largely on the style of turret number which was repeated on the rear in the same manner as the tanks shown on page 25. Although the exact location is not known this may be one of the 3.Kompanie tanks that were abandoned near Roncey, south-east of Coutances, on 29 July 1944 due to a lack of fuel.

Pzkw V Panther ausf G. 6.Kompanie, Panzer-Regiment 33. Photographed In August 1944 near Heurtevent, about 15 kilometres south of Lisieux, this tank has the metal hooks fitted to the edge of the turret used to hold lengths of spare track, as did most Panthers of this battalion. Note that the Zimmerit paste on the turret has been applied in a diagonal pattern.

The company number as it was painted onto the turret rear in black with a white outline. It should be noted that Panther 632 was photographed earlier in the campaign and is not the tank shown at left.



Pzkw V Panther ausf G. Stab, II.Abteilung, Panzer-Regiment 33. The headquarters tanks of this regiment's II.Abteilung were numbered 96, 97 and 98 and unlike the tanks of the three companies, the numbers were rendered in white without the black centre. Note the fuel can held in its bracket on the hull rear, clearly visible in our photograph. The commanding officer of II.Abteilung at this time was Hauptmann Karl Pfannkuche.

Pzkw V Panther ausf A. 3.Kompanie, Panzer-Regiment Grossdeutschland. In June 1944 this battalion was training in France at Truppenübungsplatz Mailly-le-Camp under the command of 116.Panzer-Division and for a time it was expected that the Panthers would be committed to battle. However, on 19 June the battalion was sent to the Eastern Front and took no part in the Normandy fighting, being replaced by I.Abteilung, Panzer-Regiment 24. The camouflage pattern, made up of wide bands of Rotbraun and Olivgr n over the Dunkelgelb base coat, was typical.

Note the division's famous *Stahlhelm* unit insignia displayed on the front fender of this Panther photographed in France

Befehlspanzerwagen V Panther ausf A. Stab, schwere Panzerjäger-Abteilung 654. This battalion, equipped with Jagdpanther tank destroyers, had three command Panthers on hand during the Normandy battles numbered 001, 002 and 003. Although some sources suggest that the tube for the gun cleaning rods was moved to the rear hull, as it was with the

Jagdpanthers, the author Karl-Heinz Munch in his exhaustive history of the battalion clearly shows the layout depicted here. This tank, commanded by Unteroffizier Lehmann, was destroyed on 12 August 1944 near La Villete, south-west of Villiers-Bocage.

Despite the initials LSSAH, carved into the Zimmerit texture of the turret (2) which are clearly visible in at least two photographs of this vehicle, there is some argument as to which unit this tank was allocated. The author Patrick Agte interviewed former members of the regimental headquarters company but none were able to recognise any of the crewmen depicted in several photographs of this tank. However, the implication that the headquarters was equipped with Pzkw IV tanks only is certainly incorrect as three Panthers were handed over to from Panzer-Regiment 1 in early March 1944, and allocated to the Regiments Stab. The lettering style used for the number is unusual for this time but is similar to that seen earlier in Russia.

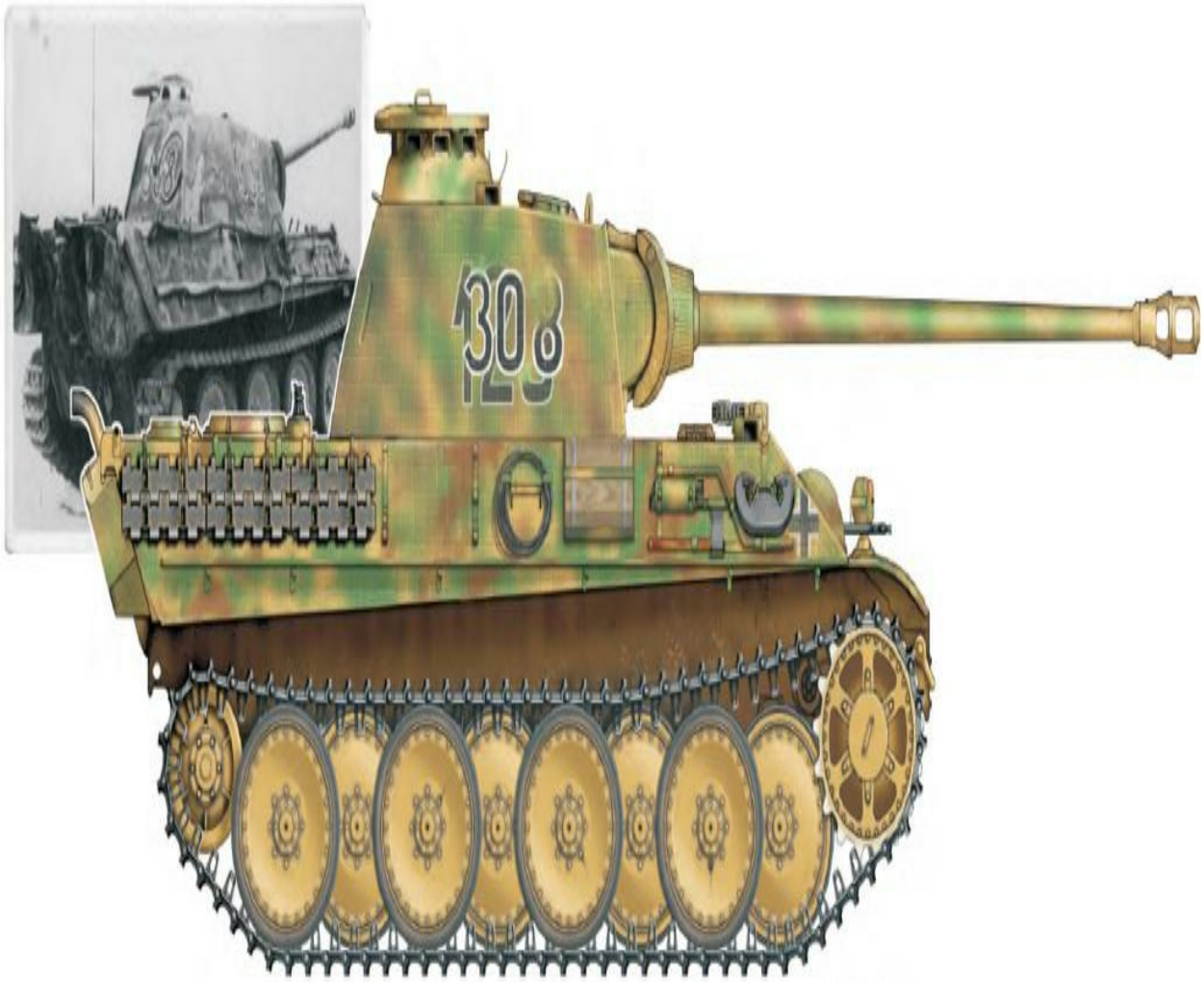
Befehlspanther Pzkw V Panther ausf A. Stab, I.Abteilung, SS-Panzer-Regiment 1. Probably photographed in late June 1944 when elements of the division arrived in Normandy, this command tank has had part of the Zimmerit removed from the turret side to accommodate the colourful and rather unusual insignia (1). The tank's number, R02, would indicate the regimental adjutant who was at this time SS-Hauptsturmführer Hans Gruhle. Not visible here is the armoured cylinder fitted to the hull rear deck which protected the insulator for the FuG8 radio's Sternantenne D.

Pzkw V Panther ausf A. 3.Kompanie, SS-Panzer-Regiment 1. This tank was photographed several times during the campaign, prior to the fighting and after the retreat. The placement of the company number was common, although not universal, throughout the battalion and was could be applied very neatly, as here, or quite roughly. The metal hooks around the turret top edge, used to hold lengths of spare track, were another identifying feature of this regiment.

Pzkw V Panther ausf A. Stab. I.Abteilung, SS-Panzer-Regiment 2. Photographed in southern France just prior to the invasion this tank is marked with the two-digit number that seems to have been used by the Panther battalion to identify its headquarters tanks. Panther 97, which was knocked out during the Normandy battles, has been identified and it seems likely that the third headquarters tank would have been numbered as 98.

Our photograph shows a detail of a 3.Kompanie Panther abandoned near Villedieu-les-Poêles towards the end of the fighting. All the battalion's Panthers, with the exception of the headquarters tanks as mentioned above, were identified by a three-digit company number which was applied to the turret sides and rear. The style and size was consistent and the numbers were all rendered in black with a white outline as shown here.

Pzkw V Panther ausf A. 4.Kompanie, SS-Panzer-Regiment 2. Photographed towards the end of the campaign in company with a US Army Sherman, this tank is typical of the battalion's Panthers. Note the fencing wire attached to the barrel to hold foliage camouflage. Some tanks extended this to cover the turret. Although it cannot be proved, and I personally believe there is insufficient evidence, there has been some speculation that this is the lone Panther that accounted for a platoon of Polish tanks at Mont Ormel.



Pzkw V Panther ausf G. 3.Kompanie, SS-Panzer-Regiment 12. The battalion's third company was badly depleted in the early fighting in Normandy and was withdrawn from the front and sent to Le Neubourg, south-east of Rouen, on 14 June after relinquishing its eight remaining tanks. At least one source states that the company was rebuilt with seventeen new tanks and returned to the front in early July, however, there is no record of an allocation of any new Panthers to the regiment between 7 June and 8 August and it may be that 3.Kompanie was rebuilt with tanks that were already on hand. This would at least explain the two turret numbers. In another photograph of this tank, taken before the 3.Kompanie number was added, the name HELLA is clearly visible, painted in white forward of the company number on the left hand side although it appears to have been removed or painted over when the number 308 was applied.

Pzkw V Panther ausf D. 2.Kompanie, SS-Panzer-Regiment 12. This regiment received a number of older tanks passed on from other regiments and although two Panther ausf D tanks were taken over from SS-Panzer-Regiment 1 in November and December 1943, this tank almost certainly came from Panzer-Regiment 26 and still retains its former company number on the commander's cupola.

This very early production tank has the large armoured pot on the hull deck towards the rear which covered the aperture for the telescoping air intake tubes. This was only fitted to vehicles assembled from June to August 1943. The company number was repeated in the same style and size on the turret rear.

Note that the bracket for the spare tracks on the hull side has been shortened and a crowbar attached above the tracks. In addition the track tensioning tool has been placed under the tube which held the gun cleaning rods. It appears that what may have been hooks or brackets have been removed from the turret sides along the top edge. The rather rough application of Zimmerit is often seen on these early models.

Pzkw V Panther ausf G. 1.Kompanie, SS-Panzer-Regiment 12. Photographed at some time after 8 July 1944 near Authie, just outside Caen, this tank's company number is rendered in a lettering style which is similar to the original, partially covered number of Panther 308 depicted on the previous page. Although it is difficult to be certain, it would appear, from the photographs we have, that none of these Panther ausf G models of SS-Panzer-Regiment 12 are fitted with the jib boom sockets, or *Pilze*, on the turret roof suggesting that they left the assembly plants in early June at the latest.

At far left is the photograph on which the illustration below is based. The presence of uniform insignia identifying the *Adolf Hitler* division, worn by at least one crewman in this series of images, need not be significant as that formation provided the cadre around which SS-Panzer-Regiment 12 was built. It was not unusual for men who had been transferred to another unit to keep their old insignia and indeed within the Waffen-SS Tiger battalions it was commonplace.

Pzkw V Panther ausf G. I.Abteilung, SS-Panzer-Regiment 12. Although there can be no doubt about the location, with the Arc de Triomphe de l'Étoile in the background, it was previously assumed that this tank was attached to SS-Panzer-Regiment 1. The series of photographs from which this image is taken is said to have been made in late June and if the

date is correct, and the sheet metal covers over the exhaust pipes would suggest that it is, then the unit is almost certainly 3.Kompanie of SS-Panzer-Regiment 12 which moved through Paris towards Harcourt on 24 June 1944.

Pzkw V Panther ausf D. 2.Kompanie, SS-Panzer-Regiment 9. Photographed near St Andre-sur-Orne in early August 1944, this tank may be one of the first Panthers the battalion received in January 1944. In the series of photographs available for both, this vehicle displays a number of similarities to the Panther ausf D depicted on page 26, in particular the very deliberately removed bracket for the jack block. The 1. Kompanie Panther ausf G shown at far left was photographed at the same time and at the same location. Note how the Zimmerit paste has been applied in a series of horizontal and diagonal lines.

Pzkw V Panther ausf A. 2.Kompanie, SS-Panzer-Regiment 9. This illustration is based on a piece of film made early in the campaign in which the tank depicted here was largely covered with foliage and Zeltbahn tent quarters. Consequently, some speculation on my part was necessary although I am satisfied that the important features are correctly rendered. Note that the style in which the company numbers of all three tanks shown on this page are painted is similar but not identical. Also, I am unconvinced by the assertion that the outline was

painted in a shade of blue, a theory which rests largely on the later use of those colours for the division’s unit insignia.

MODEL SHOWCASE

Pzkfw V Panther ausf G

NORMANDY AND NORTHERN FRANCE 1944

1/35 Scale

LESTER PLASKIT

This beautifully-constructed and painted model is based on the Dragon Models kit and includes many scratch-built parts with photo-etched details. The Zimmerit was added to the basic model which was finished with Tamiya and Vallejo paints and weathered with AK Interactive washes.

Rittermine
Sperren

These views dearly show the extensive weathering process that Lester applied to this model. Note that the red primer shows through in some areas. The streaked rain-like effect is reminiscent of the photographs taken of tanks during the retreat to the Seine.

Pzkfw V Panther ausf A

NORMANDY 1944

1/35 Scale

SERGEY KOVALYOV

334

Russian modeller Sergey Kovalyov constructed this impressive diorama around the Dragon Models Panther ausf A with figures from Alpine, MiniArt and Master Box. The British Staghound armoured car is a Bronco model. I'm indebted to Military Miniatures HQ who suppiied the photographs

334

Pzkfw V Panther ausf A

FEBRUARY 1944 PRODUCTION

1/35 Scale

SHENG HUI

Chinese modeller Sheng Hui's Panther ausf A depicts a vehicle as it would have appeared after leaving the Maschinenfabrik Augsburg-Nürnberg assembly line in Bavaria in February 1944. Besides his expert model work Sheng is the operator of ROCHM Model which produces a large range of very accurately detailed conversion kits.

Pzkfw V Panther ausf A

SS-PANZER-REGIMENT 12 NORMANDY 1944

1/35 Scale

SHIN OIKAWA

327
327

327
327
327
75

Japanese modeller Shin Oikawa's model depicts a 3.Kompanie Panther during the early stages of the Normandy fighting. Almost all these vehicles were lost in the first few weeks of the campaign and the company was withdrawn and re-equipped with early production Panther ausf G models. A photograph of one of the latter is shown on the previous page. Shin's replica is based on the Dragon Models kit.

The turret numbers of the regiment's Panther tanks were generally painted in a neat and consistent style as shown here, unlike the Panzer IV tanks of I.Abteilung whose rough finish is an identifying feature of the battalion's vehicles.

Pzkfw V Panther ausf G

AUGUST 1944 PRODUCTION

1/35 Scale

DU WEIJIE

Although Singaporean modeller Du WeiJie's replica depicts a vehicle which would have left the assembly lines just at the end of the time period covered by this book, its appearance is not significantly different from the late Panther ausf G models which served in Normandy. The most obvious difference here is the debris guard covering the gap between the turret roof and the gun mantlet.

MODELLING PRODUCTS

Together with Germany's Tiger tanks, the Panther is arguably one of the most famous armoured fighting vehicles produced during the Second World War. It has been a favourite with modellers since 1961 when Tamiya and Airfix both released their first plastic models of this tank in 1/35 and 1/76 scale respectively. Although these early kits would today be described as rudimentary, they were adequate representations which, with work, could be built into detailed replicas. More importantly, they were affordable and provided hours of enjoyment for countless modellers, paving the way for the highly detailed products of today. As with the first book in this series on the Tiger I and Tiger II, I have chosen to concentrate on the most popular modelling scales of 1/35 and 1/48, although I have endeavoured to include some of the smaller-scale models. I should stress that this list is not exhaustive, mostly due to reasons of space and almost constant new releases. As many manufacturers regularly withdraw products from their catalogues, often only to be repackaged and re-released at some later date, I have tried to available at the time of writing and where this is not so I have tried to make it clear. I have included all versions of the Panther which served with the German Army in Normandy although they may not be promoted as such, for example, models which do not include modifications such Zimmerit antimagnetic mine paste or other later production features. Accordingly, I have purposely omitted models specifically marketed as having factory modifications which were incorporated after August 1944 and could not, therefore, have taken part in the battles west of the Seine. Note that for this chapter I have used the word 'Type' in place of the more correct Ausführung, as at least one major manufacturer does, as a matter of convenience. Finally, I don't believe there will ever be a 'last word' on the production and combat history of these fascinating vehicles and I would encourage readers to undertake their own research as a rewarding hobby in itself. An index of manufacturers, together with suggestions for further reading, can be found on page 64 of this book.

DRAGON MODELS LTD

1. The later engine exhaust system incorporating two manifold cooling pipes introduced from January 1944 in 1/35 scale. 2. Detail of the early Type D kit showing the periscope guards, Bosch headlight and driver's visor in the open position. 3. Detail of the early Type G model turret showing the Zimmerit coating, turret lifting ring and rain guard over the gun mantlet.

All Dragon models include sets of marking options printed by Cartograf of Italy. The examples shown here are both from 1.35 scale Panther kits.

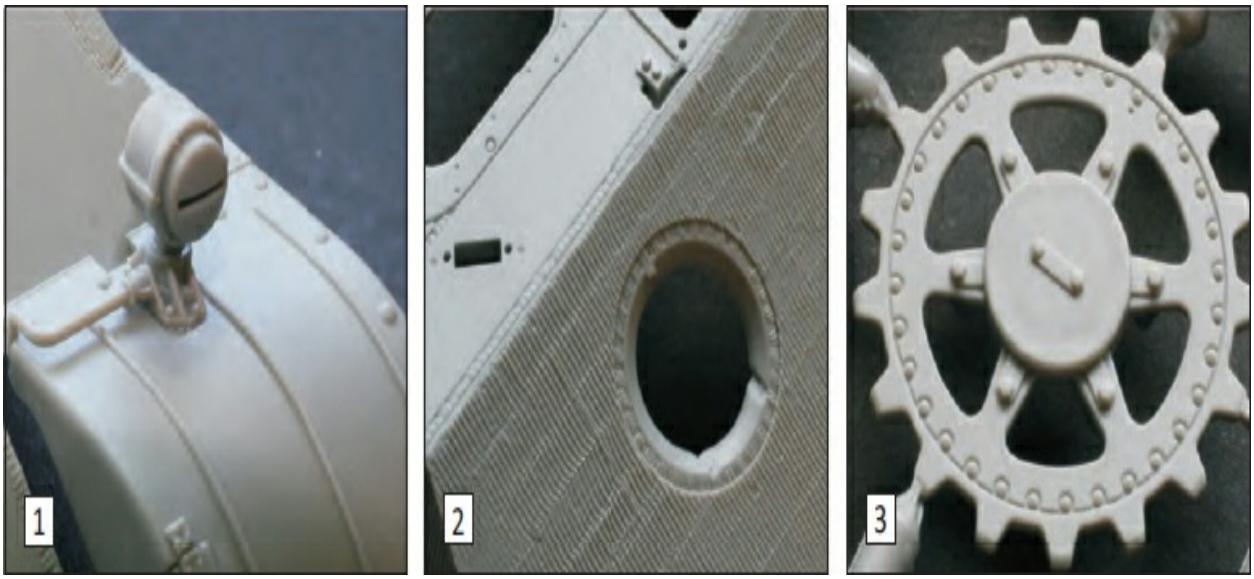
The late model 1/35 scale Panther Type A kit built with the photo-etched brass and aluminium accessory set from Eduard Model Accessories.

Dragon Models 1/35 scale kits all suitable for the Normandy battles, in spite of the title on the box art of the early Type A.

Dragon Models was one of the first of the major manufacturers to offer accurate replicas in 1/35 scale and their kits are today something of a benchmark. The company's small-scale releases are some of the best available. At the time of writing this Hong Kong based company offered seven construction kits in both 1/35 and 1/72 scale representing variants of the Panther tanks in service at the time of the Normandy campaign including a Type D, a Type A and an early Type G, all with Zimmerit texture. Also produced in 1/35 scale are a later Type G and a Befehlspanther Type G which could, with some alteration, represent tanks fighting with the Panzerwaffe in Normandy, although command tanks based on this model would have been rare at the time. The smaller scale kit of the early Type G includes a number of well detailed and anatomically-correct crew figures. In addition to these, Dragon produces a pre-painted early Type G in 1/72 scale although the model lacks Zimmerit, which was a standard feature in the summer of 1944, and is finished in markings that are somewhat dubious. Shortly before this book was completed Dragon released a late production Panther Type A kit in 1/72 scale which specifically represents a tank serving on the Normandy Front.

Sd.Kfz.171 PANTHER G
EARLY PRODUCTION

The 1/72 scale early Type G model here completed with the accessory set from E.T. Models.



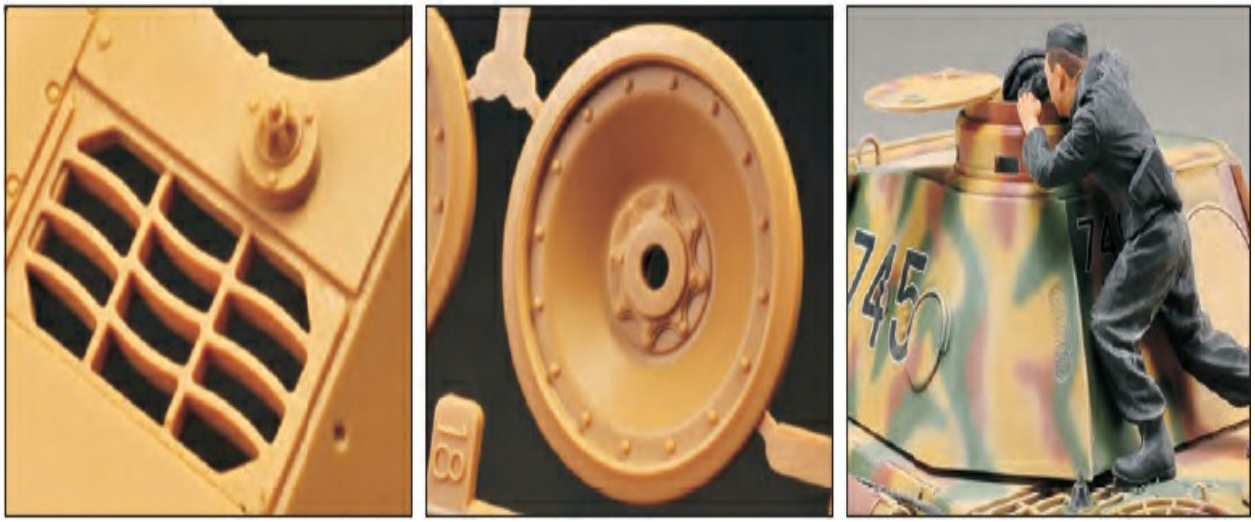
1. Detail of the Bosch headlight and front fender of the later Type G kit. 2. The glacis of the early Type G model showing the Zimmerit texture. 3. The drive sprocket common to both kits. All in 1/35 scale.

TAMIYA

This Japanese company has transformed itself from a post-war sawmill and timber supply concern into the largest producer of scale model kits in the world. In 1959, after some success with wooden models, the company switched to injection moulded plastic and in 1961 released its first armoured vehicle kit, a Panther. By the early 1970s Tamiya was producing a large range of armoured vehicles, with complementary figures and accessories, and was almost solely responsible for the rise in popularity of 1/35 scale. Although quite rudimentary by today's standards, these kits were highly accurate and detailed when compared to what was available at the time. Importantly, they were all made to the same scale, a concept which the early British manufacturers had pioneered, encouraging modellers to build a collection. The company's near monopoly of the 1/35 scale market remained unchallenged until the release of the first Dragon Models kits in 1987. The current catalogue lists a Type A, which is an older kit lacking some detail and features of the newer releases, an early Type G, in both a static and motorised version, an early Type G with a photo-etched Zimmerit stencil and the recently released early Type D which could be converted to a later version

with minimum effort. In 2003 Tamiya began releasing a series of models in 1/48 scale and this line has been extremely successful for the company, combining as they do the potential for a high level of detail without the expense of the bigger kits. The sole 1/48 scale offering at the time of writing is a later Type G which lacks the Zimmerit texture common to most, if not all, German tanks in Normandy. Tamiya also produces radio-controlled models of a Type G in both 1/35 and 1/16 scale.

Tamiya's 1/35 scale early Panther Type G kit. This model comes with separate sheets of Zimmerit texture and is motorised.



Details of the recently released Panther Type D. Although this kit depicts a tank at the time of the Panther's debut at the Battle of Kursk, many early models were still in service in June 1944 and the modifications that had been made in the interim are described in the technical section.

AIRFIX

No list of scale model Panther tanks would be complete without at least some mention of Airfix. The company's 1/76 scale Panther, based on a Type G model, was first released in 1961 and although the box art may have been updated over the years, the kit itself is unchanged.

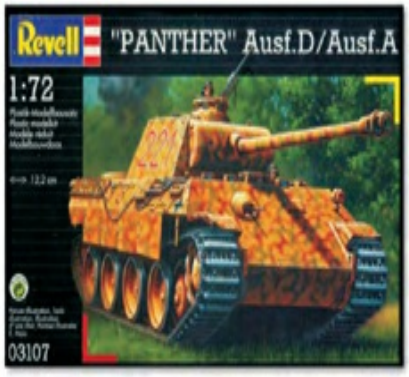
A first-edition Airfix Panther. Popular with collectors, examples can still be found although prices vary dramatically.

ITALERI

This Italian company has been producing plastic models since its foundation in 1962. At present the catalogue contains a Panther Type G, a later model, a Panther Type D and a Panther Type A in 1/35 scale. In 1/72 scale Italeri produces a Panther Type G in their Fast Assembly range, the kit containing two models comprising just ten pieces each. Of the large model manufacturers Italeri alone has ventured into 1/56 scale with a Panther Type A kit. This scale complements 28mm wargames figures of which there are now quite a number on the market.

Italeri's Panther Type A kit. First released in 1993, this model has recently been reboxed and was also released by Zvezda. The 1/56 Panther Type A with Zimmerit texture. This version was the most common Panther in Normandy. The 1/35 scale Panther Type A completed with the detail set from Eduard models made specifically for this kit.

REVELL



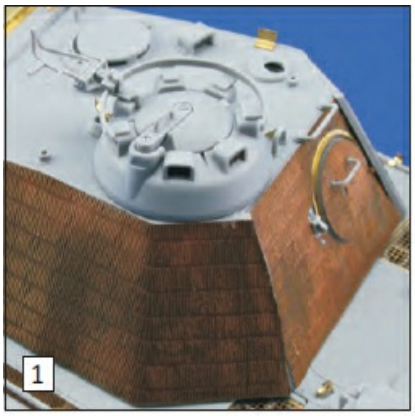
Like Airfix, this company has gone through many changes of ownership over the years since its founding in 1943, at one time operating as two distinct entities in the US and Germany. The company's current catalogue shows the 1/72 Panther Type A and Panther Type G shown here. Although these are both good kits, readers should be aware that the commander's cupola should have seven periscopes and not six, an inexplicable error in otherwise accurate models.

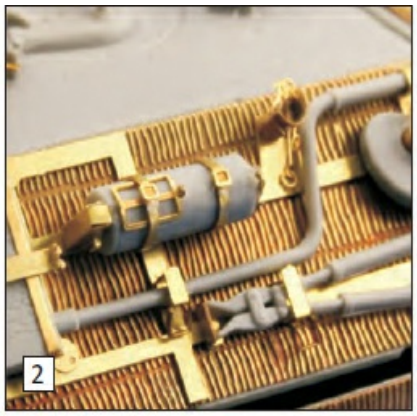
ZVEZDA

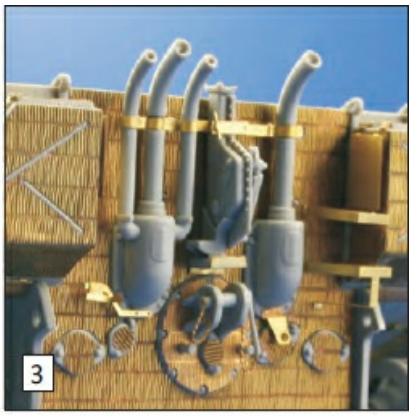
This Russian company seems to be abandoning its 1/35 releases, of which a number were reboxed older kits, to concentrate on the wargaming scales of 1/72 and 1/100, the latter being compatible with 15mm figures. The major sellers of aftermarket detail sets, however, are continuing to offer sets for the larger kits. Despite a number of requests for information I have been unable to discover any more.

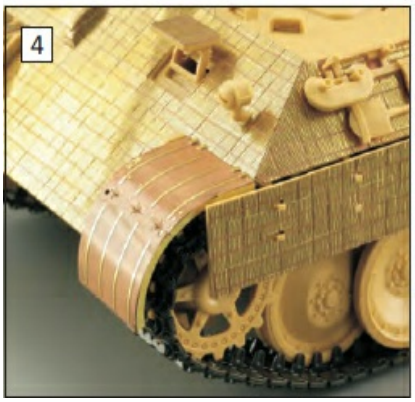
EDUARD MODEL ACCESSORIES

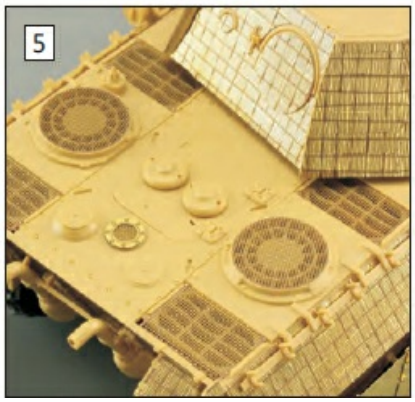
Founded in 1989, this Czech company produces high quality upgrade kits in photo-etched metal and resin and a number of scale models. Currently available are extensive photo-etched detail sets to update the newly released Tamiya Panther Type D, including sets of Zimmerit produced in the patterns typical of MAN and MNH manufactured vehicles, the Zvezda Type D and the Dragon Type D, Type G and late Type A. The company also offers vinyl masks to aid with painting the roadwheels. At the time of writing all the 1/48 and 1/72 scale sets for the Panther had been discontinued. The recently released Type G kit from Tamiya includes a photoetched Zimmerit set from Eduard.

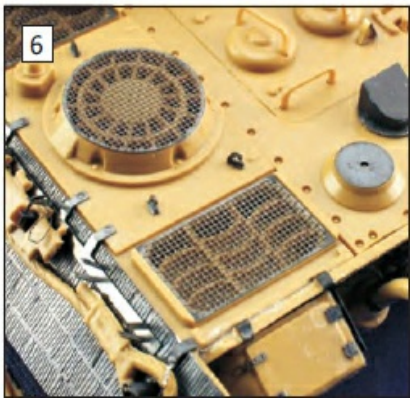

1


2


3


4

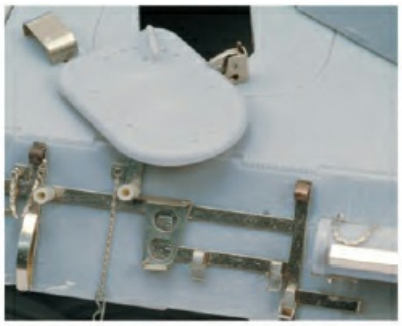

5

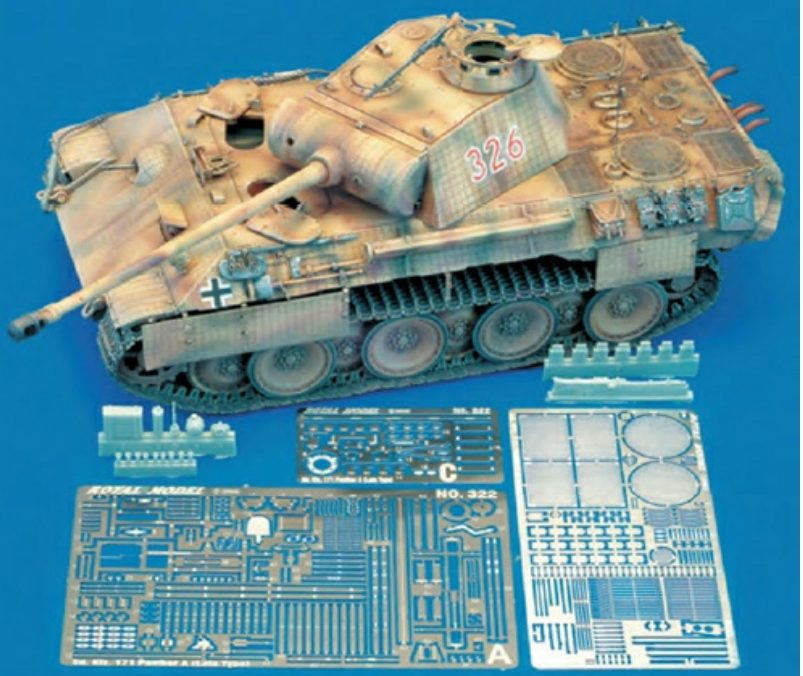

6

1. Dragon Models Panther Type G turret with Eduard Zimmerit. 2 and 3. Dragon Models Type A late production version. Below: The Dragon Models late production Panther Type A with the complete detail set. At bottom, left to right: 4 and 5. Tamiya Panther Type D. 6. Italeri Panther Type A. Although these sets are marketed as being appropriate to specific manufacturer's models, most details will fit all kits.

ROYAL MODEL

This Italian company has been producing highquality accessories and aftermarket parts since the early 1990s under the guidance of its founder, Roberto Reale. The catalogue includes complete upgrade sets in photo-etched brass and resin for both the Dragon early and late Type A, the Tamiya Type G and the Italeri Type A, all in 1/35 scale. Royal Model also offers photo-etched brass hull Schürzen for the Type A and Type G which are appropriate for all 1/35 scale kits. Other 1/35 scale items include two interior detail sets for the Type A and photo-etched Zimmerit for the Type A, either factory fresh or damaged. More generic parts in resin and brass are an engine transmission, detailed rear stowage bins, engine grills and a Kugelblende machine-gun mount.




326
NO. 322
A
C

Above and at left is the Dragon Models Type A which has been beautifully painted and built with the detail set of photo-etched brass and resin shown and Royal Models' tank crew. The images at the top of the page depict parts of the detail and upgrade sets for the Dragon Type A and Type D.

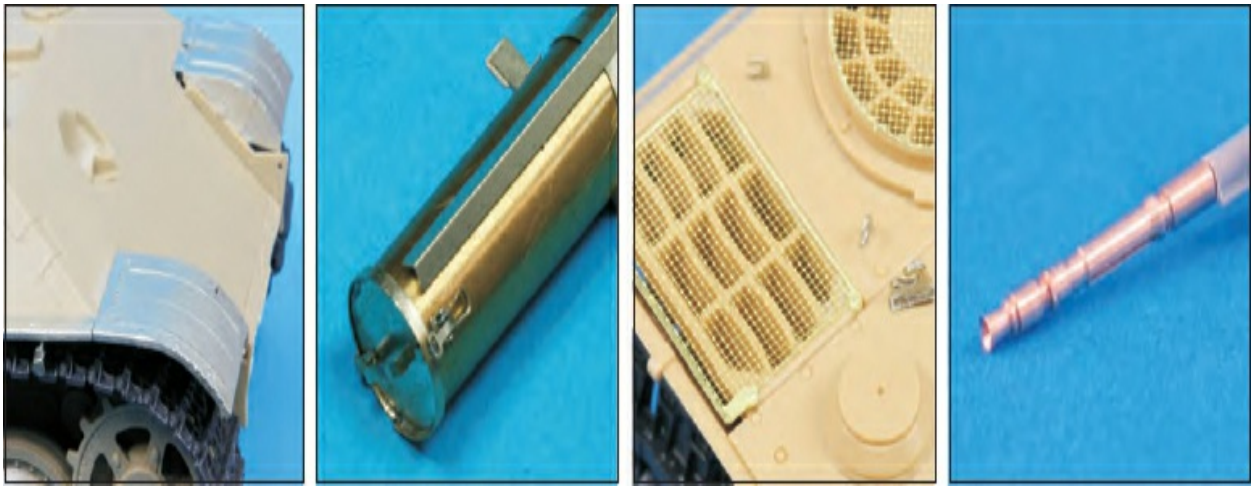
VOYAGER MODEL

1. The Panther Type D turret including the shell ejection port and internal periscope attachments. 2. The earlier pattern tube used to hold the gun cleaning rods. 3. The anti-

aircraft machine gun bracket and hooks for spare track links. Below: A 1/35 scale Dragon Models Panther Type A, complete with cast metal spare tracks and damaged roadwheels in resin.

Voyager have been manufacturing upgrade sets for scale models since 2003 with the release of their first set for 1/35 scale armour. The company produces a number of items in both 1/72 and 1/35 scale in photo-etched brass and also resin, including wheel hubs, damaged road wheels and ammunition crates and boxes. In addition Voyager also offers highly-detailed and accurate milled aluminium and brass barrels and muzzle brakes. Although most of these details would be compatible with almost all manufacturers' models some sets are marketed as appropriate for the specific kits from Tamiya, Dragon, Zvezda and ICM.

ABER



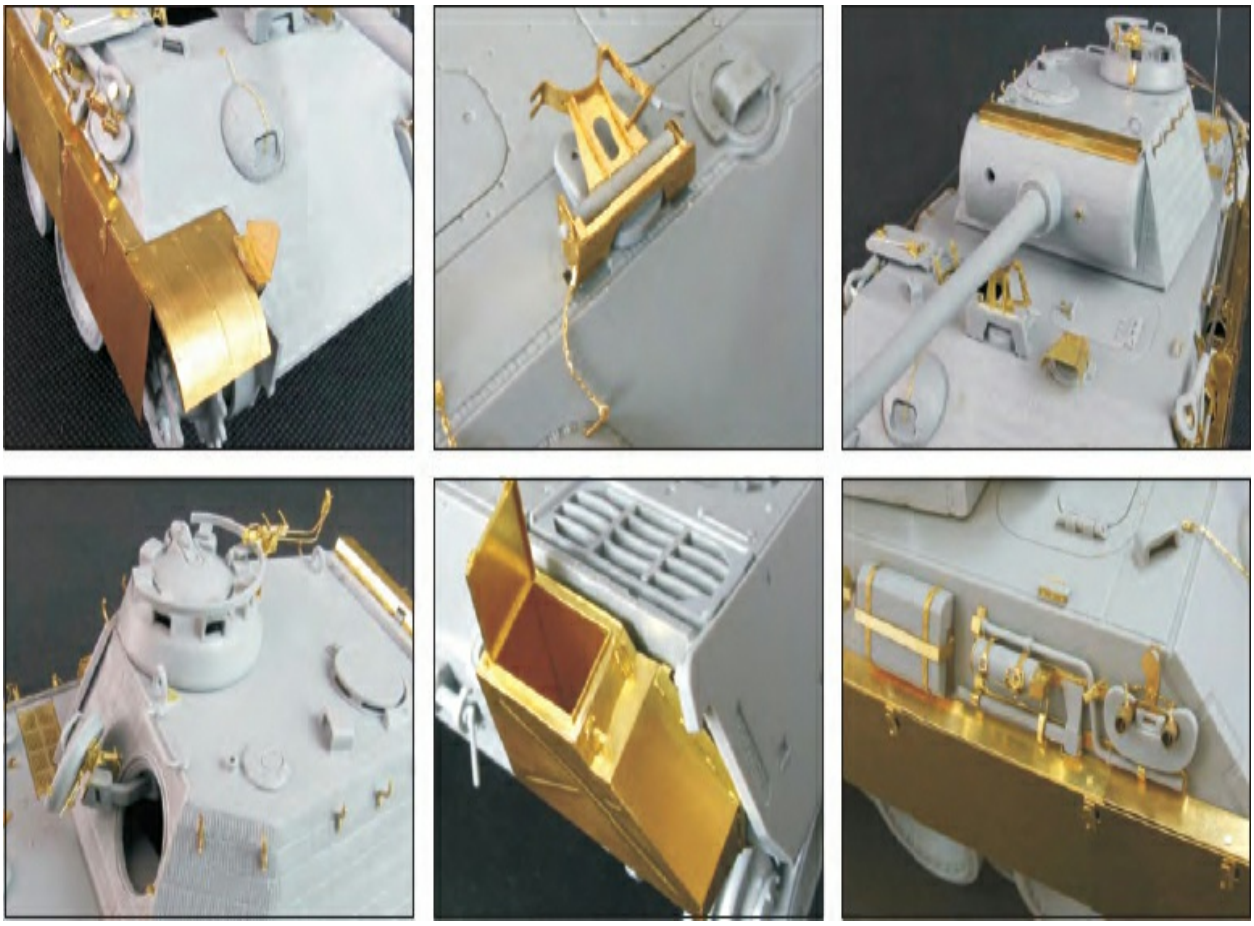
This Polish company has been manufacturing and selling upgrade sets since 1995, working in photoetched brass, milled aluminium and brass, stainless steel and even wood. For some time now Tamiya has included a number of Aber products with their models. A full list of the accessories made specifically for the Panther in all scales would be far too large to reproduce on this page, particularly in light of the company's regular new releases and the reader can find the company's contact details on page 64. The images shown above from left to right are parts of the fender and mudguard set for a Panther Type G, the tube for the gun cleaning rods, parts of the set for the rear hull deck details including wire mesh intake covers and various hooks

and a barrel for the hull MG 34. All items are in 1/35 scale.

LION ROAR

Based in Shanghai, Lion Roar produce a range of high-quality detail sets for plastic model kits. Their catalogue at the present time includes a complete update set in photo-etched brass for the Dragon Models Panther Type G, details of which are shown above. The company also offers a number of generic details such as tow cables and tools.

GRIFFON MODEL



Based in China, this company produces a large range of photo-etched brass sets for the Panther and Jagdpanther in 1/35 scale to fit most manufacturers' kits, although they do recommend Tamiya and Dragon. All the photographs above show details of the upgrade sets for the Dragon Models Panther Type G kits of the early and later versions.

BLACK DOG

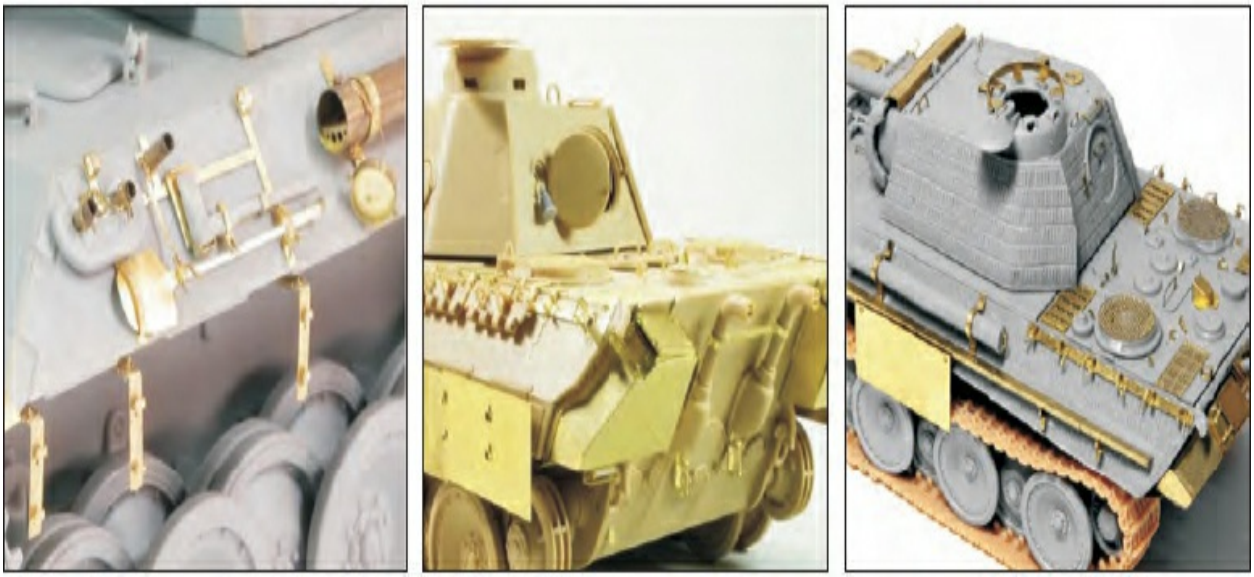
Based in the Czech Republic, this company produces a large range of detailed resin accessory and upgrade sets for armoured vehicles in 1/35, 1/48 and 1/72 scale and a small number of complete kits. They do, however, only offer a small number of items for the Panther and all in 1/72 scale. Shown above from left to right are a photo-etched brass set for the Dragon Panther Type D, a correct turret for the Panther Type G and ammunition crates and shells for the 7.5cm main gun.

RB MODEL

RB Model from Poland produce a range of milled aluminium and brass gun

barrels and resin accessories for 1/72, 1/48 and 1/35 scale armour models. Shown above is the beautifully detailed 1/35 scale barrel and muzzle brake for the 7.5cm KwK 42 L/40 gun which armed the Panther. More generic items include highly detailed towing shackles, radio antenna insulators, 20-litre fuel cans and 200-litre fuel drums.

E.T. MODEL



E.T. Models, a relatively new manufacturer from China, produce upgrade sets in 1/72 and 1/35 scale in brass and resin. Shown above, from left to right, are the etched-brass sets to fit the Dragon 1/35 scale Panther Type D, the 1/35 scale set for the recently-released Tamiya Panther Type D, and a highly comprehensive set in photo-etched brass for the Dragon Models early Panther Type G in 1/72 scale. Most sets are specifically designed, according to the company, to fit Dragon or Tamiya kits but some, for example the stowage bin, are referred to as universal.

AFTERMARKET TRACKS

Although the days of ‘Rubber Band’ tracks are for the most part in the past, with many plastic kits containing realistic tracks often made up of individual links, the number of aftermarket products available seems to have increased, despite the extra expense and work required. Those shown above are, from left to right: 1. MasterClub, a newcomer from Russia. The level of detail is apparent from our photograph. 2. Model Kasten from Japan produce an extensive range of plastic injection-moulded tracks in 1/35 scale some of which are workable. 3. Friulmodel, a Hungarian company who set the standard for aftermarket tracks for many years. As with Modelkasten, some sets come with a detailed drive sprocket. These tracks are extremely realistic and are in fact miniatures of the real thing. They are, however, quite expensive. 4. Tamiya produce a set of individual track links in plastic marketed specifically for their Panther kits and I cannot say with certainty if they would fit other manufacturers’ models. Not shown are Dragon Models ‘Magic Tracks’ which are injection-moulded individual track links which are glued together. They are highly detailed, easy to work with and the finished item is very realistic although, obviously, they are not workable. Some Dragon kits include these tracks as a bonus.

MARKING OPTIONS

One of the most appealing aspects of armour modelling is the application of unit and tactical markings and most, if not all, kits today, regardless of scale, come with a set of waterslide transfers or decals. Although most are of excellent quality, the choices can be limiting and the aftermarket sets

produced by specialist manufacturers allow the modeller to depict a particular vehicle. Each image presented here shows just a portion of a particular sheet in an effort to highlight the quality of the printing. Some of the markings shown here represent tanks that are shown throughout this book.

1
2
3
4
SPARES
2001 ARCHER FINE TRANSFERS
5
6
7
8
9
German decal sheet 1 of 4
GE944

4
STAR DECALS
1/35 35-C 1023
STAR DECALS
35-848
STAR DECALS 1/35
2. Panzer Division
in France 1944
35-848

221

1 and 2. Peddinghaus Decals. 3 and 4. Archer Dry Transfers. 5 and 6. Bison Decals. The author was instrumental in creating the accurate artwork for these transfers. Although the owner has moved on to Star Decals, the Bison sets are still available. 7. Star Decals, the new incarnation of Bison Decals. 8. Flames of War. This sheet contains generic markings for a complete company. 9. Armo. At left: The detailed instruction sheets that accompany Star Decals sets. Below: Italeri's 1/56 scale Panther Type A complete with decals from the Bolt Action range. Like the Flames of War sets, these are largely generic.

THE WAFFEN-SS PANTHER BATTALIONS

SS-PANZER-REGIMENT 1

Officially formed on 14 October 1942, this regiment was specifically created for SS-Panzergrenadier-Division Leibstandarte SS Adolf Hitler (LAH).

In May 1943, I.Abteilung was transferred to Germany to begin its conversion to the Panther tank and did not rejoin the regiment until November. By the end of 1943 SS-Panzer-Regiment 1 had only enough tanks to form a weak Panzer-Abteilung made up of three companies equipped with the division's remaining Tigers, Panthers and Pzkw IV tanks. In early 1944 when the division was sent to Belgium to refit, this battalion remained in Russia as part of Panzergruppe SS-Panzer-Division LAH (1).

On 11 April 1944, what remained of the Kampfgruppe was ordered to rejoin the division in Belgium to rest and refit. On 1 June, just days prior to the invasion, the division reported that I.Abteilung, SS-Panzer-Regiment 1 was at half strength with thirty-eight combat-ready Panthers on hand. The other units were in a similar state with neither of the division's Panzergrenadier regiments possessing any of their authorised halftracks. In addition, many of the division's personnel were untrained recruits and it is hardly surprising that it was Saturday, 17 June 1944 before the first combat elements of 1.SS-Panzer-Division left Belgium for Normandy. Indeed, the only major unit of the division to take part in the fighting during June was SS-Panzergrenadier-Regiment 1 and it was not until 1 August that all the available tanks of the Panzer regiment were at the front (2).

The division remained in the area south of Caen, fighting alongside 12.SS-Panzer-Division, together forming I.SS-Panzerkorps, until 4 August when much of what remained of 1.SS-Panzer-Division was formed into two battle groups to support 2.Panzer Division in the Mortain counterattack. The first, Kampfgruppe Kuhlmann, comprised I.Abteilung, SS-Panzer-Regiment 1 and III.Abteilung, SS-Panzergrenadier-Regiment 2. The second, Kampfgruppe Knittel was made up of SS-Panzer-Aufklärungs-Abteilung 1 (3). The first and second battalions of SS-Panzergrenadier-Regiment 2 arrived later in the

battle. The ad-hoc nature of this force was typical of both the formations involved in Operation Lüttich and also the divisions which had borne the brunt of the fighting up to now. After the failure of the Mortain attack the division fought its way out of the Falaise Pocket, the Panzer regiment reduced to a single platoon made up of two Panther and two Pzkw IV tanks.

TANK STRENGTH. I.ABTEILUNG, SS-PANZER-REGIMENT 1

April		May		June		July		August	
Allocated	On Hand	Allocated	On Hand	Allocated	On Hand	Allocated	On Hand	Allocated	On Hand
0	3*	45**	47	34	71***	0	72	0	0

** Allocated to the regimental headquarters in March while the rest of the battalion was in Russia*

*** 24, 16 and 5 tanks were taken over from Pz-Rgt 33, Pz-Rgt 35 and SS-Pz-Rgt 3 respectively*

**** The total of 71 is my estimate based on the preceding figures although it is unlikely, in fact almost impossible, that all 34 June replacements arrived in that month. This regiment was well known for under-reporting its tank strength and in fact stated that 78 Panthers were on hand before the batttalion left Belgium while just the 72 shown here were unloaded in France.*

Accurate figures for August 1944 are not available

Photographed in Belgium prior to the invasion this Panther ausf A of SS-Panzer-Regiment 1 is also shown and discussed on page 24. AS can be seen in the photographs on the following pages, the lengths of spare track on the turret sides and the hooks that held them in place were an identifying feature of the Panthers of this regiment.

Notes

1. The division was renamed 1.SS-Panzer-Division LAH on 22 October 1943.

2. Important elements of the division where still in Belgium including the division's reconnaissance battalion whose promised Sdkfz 250/9 halftracks never materialised.

3. These Kampfgruppen were commanded by Herbert Kuhlmann and Gustav Knittel respectively. Kuhlmann was at the time the officer commanding I.Abteilung, SS-Panzer-Regiment 1 and after being wounded in September returned to the front to lead the Panzer regiment of 12.SS-Panzer-Division.

328

Both images on this page show Panther ausf A tanks of I.Abteilung, SS-Panzer-Regiment 1 of 1.SS-Panzer-Division photographed on the road between Saint-Barthélemy and Juvigny-le-Tetre north-east of Mortain in August 1944 in the aftermath of Operation Lüttich. The Panthers of this battalion formed part of Kampfgruppe Kuhlmann which was subordinated to 2.Panzer-Division for the attack. The lengths of spare track were attached to the hull sides by sturdy metal hooks which had been welded to the turret roof and overhung the sides. The practice of marking the tank's number on the side of the gun mantlet was necessitated by the spare tracks which normally covered the turret sides and was an identifying feature of this battalion. The regiment did not received any replacement tanks during the Normandy battles and none of the original forty-five Panthers survived the campaign.

55-PANZER-REGIMENT 2

The regiment's headquarters and II.Abteilung were formed on 14 October 1942 and attached to SS-Division Das Reich (1). In the same month LAbteilung was formed by renaming SS-Panzer-Abteilung 2 in Oct 42. In May 1943, I. Abteilung was transferred to Germany to train on the Panther

(2).

After completing their training the Panthers returned to the division but by the end of December 1943 had suffered such severe losses that SS-Panzer-Regiment 2 had been reduced to a weak battalion with three companies made up of the surviving Panthers, Tigers and Pzkw IV tanks. This battalion remained in Russia as part of SS-Regimentsgruppe Das Reich while the rest of the division was transferred to the West for rest and refit. On 11 April 1944 the Kampfgruppe was ordered to rejoin the division in France, leaving all its heavy equipment in the East. The division itself was in a state of near exhaustion and when the Allies landed in Normandy some 9,000 of its ranks were made up of raw recruits with just seventy tanks available for immediate deployment.

Nevertheless, on 11 June 1944, the division was placed under the command of Heeresgruppe B and the next day ordered to move towards the front. While the division's tanks and other tracked vehicles prepared to move by rail, the wheeled vehicles, many of which had been commandeered at the last moment, set off by road and by Friday, 16 June had reached the area around Mortain. On the following Monday parts of the Panther battalion were just being unloaded at Le Mans. The journey north was, however, characterised by constant delays and as late as the end of June many units including a company of Panthers and another of Pzkw IV tanks were only just leaving southern France for Normandy and it was not until 26 July that the last trains were being unloaded. Many accounts cite the activities of the French Resistance and Allied air power in delaying the northern movement of the division but it appears that the most important reason was simply the lack of vehicle spare parts.

The division, with parts of 17.SS- Panzergrenadier-Division, attempted to halt the American breakout, codenamed Cobra, at the end of July but was forced to withdraw, losing many of the Panzer regiment's irreplaceable tanks in the process.

Two Kampfgruppen of the division took part in Operation Lüttich in early August, although just three Panthers, five Pzkw IV tanks and eight

Sturmgeschütz III assault guns could be mustered for the operation. Tasked with the almost impossible mission of capturing Avranches, far to the west, one battle group did take the town of Mortain and managed to push on to the west and south-west as far as Saint Hilaire, only withdrawing when encirclement was imminent. Withdrawn to the west of Falaise, the last few tanks of the division managed to inflict a severe setback to units of the 1st Polish Armoured Division near Mont Ormel on 20 August 1944, in the process allowing many German units to escape the Falaise Pocket.

On 28 August the division was able to report that six serviceable tanks of all types were all that remained.

A Panzerbefehlswagen Panther V of SS-Panzer-Regiment 2 training in southern France in early 1944. At left: An abandoned Panther ausf A of 3.Kompanie photographed at Villedieu-les-Poêles, a small town on the Caen-Avranches road, in August 1944.

Notes

1. The division was renamed 2.SS-Panzer-Division Das Reich in October 1943.
2. To support the division at the front a third battalion was raised and equipped throughout with captured Soviet T-34 tanks. On 22 October 1943 III.Abteilung was disbanded.

TANK STRENGTH. I.ABTEILUNG, SS-PANZER-REGIMENT 2

April		May		June		July		August	
Allocated	On Hand	Allocated	On Hand	Allocated	On Hand	Allocated	On Hand	Allocated	On Hand
		24*	39**	17*	26	0	80***	0	0

** There is no official record of the actual delivery of these tanks*

*** The operational figure may have been as low as 25*

**** This figure must have been compiled quite early in the month as by the beginning of August the battalion reported that just 3 serviceable Panthers were on hand*

Accurate figures for August 1944 are not available

Photographed on 16 July 1944 outside Sainteny near Carentan this Panther ausf A of I.Abteilung, SS-Panzer-Regiment 2 exhibits several distinctive features of this model including the Topfblende machine-gun mount and the monocular gun sight, both introduced in November 1943. The tracks appear to be the earlier type manufactured before the introduction of the Mistollen ice sprags or cleats and the pattern of Zimmerit anti-magnetic mine paste would seem to indicate a vehicle produced by MAN. From 10 July this battalion, commanded by Sturmbannführer Rudolf Enseling, took part in several attacks in this area.

SS-PANZER-REGIMENT 9

Formed in February 1943 and attached to 9.SS-Panzergrenadier-Division, the regiment was ordered to be re-organised in the following October with I.Abteilung equipped with Panthers and II.Abteilung with Pzkw IV medium tanks (1).

At the time of the Normandy landings most of the division was fighting on the Russian Front while I.Abteilung of SS-Panzer-Regiment 9 was still training on their new Panthers at Mailly-le-Camp in France. The division was ordered to the Normandy Front on Monday, 12 June 1944, although by this time it had been severely depleted in the fighting around Tarnopol and the attempt to relieve 1.Panzerarmee trapped in the Kamenets-Podolsky pocket between the Bug and Dniestr rivers in modern day Ukraine (2).

The division remained in the area south of Caen and by the end of July the Panther battalion had rejoined the regiment. At this time I.Abteilung was a powerful formation reporting that seventy-nine Panthers were ready for combat. However, the battalion would not receive a single replacement during the battles in Normandy. Just over two weeks later, on 16 August, 9.SS-Panzer-Division was ordered to withdraw towards Vimoutier, outside what would become known as the Falaise Pocket, handing over a number of tanks over to SS-Panzer-Regiment 12. On 20 August the remaining tanks of SS-Panzer-Regiment 9, supported by units of 2.SS-Panzer-Division were ordered to capture the high ground above the village of Coudehard, about 8 kilometres east of Trun, referred to as Mont Ormel, in an effort to open an escape route for the German units trapped around Falaise. The Mont Ormel positions were held by units of 1st Polish Armoured Division who stubbornly refused to give way until a second assault made at around noon by tanks of 10.SS-Panzer-Division, 12.SS-Panzer-Division and 116.Panzer-Division

broke through the Polish front, once again opening the gap. While the German units within the Pocket streamed toward the relative safety of Chambois and the bridges across the Dives, the remnants of 9.SS-Panzer-Division held off the Canadians who were advancing from the north to assist the Poles. Within a few hours approximately ten thousand German troops were able to escape. Although the Allied line on Mont Ormel had been penetrated, the Poles had not been overrun and isolated units were able to direct accurate artillery fire onto the Germans who, completely exasperated, scrapped together every available tank and threw them at the Polish positions, inflicting such damage that the defenders could take no further part in the battle. At 11.00am, on the following morning, the German commander on the spot, Oberst-Gruppenführer Paul Hausser, ordered that a final attempt be made to secure Mount Ormel (3).

After a promising start the attack was narrowly beaten back just after noon by Canadian armoured units which had managed to reinforce the Poles. That afternoon the last survivors of the Hohenstaufen division were ordered to retreat towards the Seine.

TANK STRENGTH. I.ABTEILUNG, SS-PANZER-REGIMENT 9

April		May		June		July		August	
Allocated	On Hand	Allocated	On Hand	Allocated	On Hand	Allocated	On Hand	Allocated	On Hand
0	22*	20**	42*	39**	79	0	25***	0	0****

* My estimates based on the allocations for January and February and the confirmed total for June

** These tanks may not have been delivered in the same month in which they were allocated

*** Actually recorded on 18 July.

****During August a number of tanks were handed over to SS-Pz-Rgt 12

Accurate figures for August 1944 are not available

A Panther ausf A of 3.Kompanie, SS-Panzer-Regiment 9 photographed in Saint-Lambert-sur-Dives in the aftermath of the battles for the Falaise Pocket. Examples of the tanks of this battalion are also shown on page 28 of the Camouflage and Markings section. By early August the division's remaining armoured vehicles were formed into a Kampfgruppe and remained in the area south of Caen until 16 August when it was ordered to withdraw towards Vimoutier via Trun. The few remaining tanks of the division, together with 2.SS-Panzer-Division, were involved in the attempts to relieve the encircled German units from outside the

Falaise Pocket.

Notes

1. In November it was decided that II.Abteilung would instead be established as a Gemischte, or mixed, battalion armed with Pzkw IV tanks and Sturmgeschütz III assault guns. The division was renamed as 9.SS-Panzer-Division Hohenstaufen on 26 October 1943.

2. The Panzerjäger battalion remained in Russia and although an ad-hoc force was created and equipped with towed 7.5cm Pak 40 guns, the tanks of SS-Panzer-Regiment 9 would have to assume much of the antitank role.

3. Hausser was promoted to this rank on 1 August 1944. During the fighting around Falaise he was shot through the jaw, an indication of the ferocious nature of the battle that a such a senior officer could be injured in this manner.

SS-PANZER-REGIMENT 12

Notes

1. Roughly 2,000 senior NCOs and officers were transferred from the Adolf Hitler division while the rank and file was largely made from senior boys of the Hitler Youth.

2. What assets the division possessed by early August were supposed to take part in Operation Lüttich but were held back on the initiative of the divisional commander, SS-Oberführer Kurt Meyer, who correctly predicted the possibility of a major British offensive to take Caen.

Formed on 3 November 1943 around a cadre of veterans of the 1.SS-Panzer-Division, the regiment was attached to 12.SS-Panzer-Division Hitler Jugend (1).

New equipment for SS-Panzer-Regiment 12 was slow in arriving and I.Abteilung was not able to conduct any battalionsized training with their Panther tanks until March 1944. Just after this the division was moved from Truppenübungsplatz Beverloo, in Belgium, to the area around Caen and attached to I.SS-Panzerkorps.

The division was almost continually engaged during the fighting in Normandy from the afternoon of the first day of the invasion and remained in the Caen area for the duration of the campaign fighting against British and Canadian units (2).

During much of the fighting in Normandy elements of the division were detached to form ad - hoc battlegroups or Kampfgruppen. The most important of these were Kampfgruppe Wünsche and Kampfgruppe Olboeter

led by Obersturmbannführer Max Wünsche, the commander of the Panzer regiment, and Sturmbannführer Erich Olboeter, an experienced battalion commander from SS-Panzergrenadier-Regiment 26. Kampfgruppe Wünsche was made up of the headquarters of SS-Panzer-Regiment 12, the Tigers of schwere SS-Panzer-Abteilung 101 and the Panthers of both I. Abteilung, SS-Panzer-Regiment 1 and I.Abteilung, SS-Panzer-Regiment 12. On 31 July the tank strength of this unit was reported as sixty-one Panthers, a small number of Pzkw IV tanks and nineteen Tigers. This formation was one of the strongest armoured formations available to the Germans and it was intended that Wünsche's tanks act as a mobile reserve in the area south-east of Caen. The infantry element was provided by the Panzergrenadiers of Olboeter's III.Abteilung supported by parts of Sturm-Panzer-Abteilung 217, equipped with a number of Sturmpanzer IV Brummbär self-propelled guns (1).

TANK STRENGTH. II.ABTEILUNG, SS-PANZER-REGIMENT 12

April		May		June		July		August	
Allocated	On Hand	Allocated	On Hand	Allocated	On Hand	Allocated	On Hand	Allocated	On Hand
		40*	50**	13*	79	0	22	0	10**

** These tanks may not have been delivered in the same month in which they were allocated*

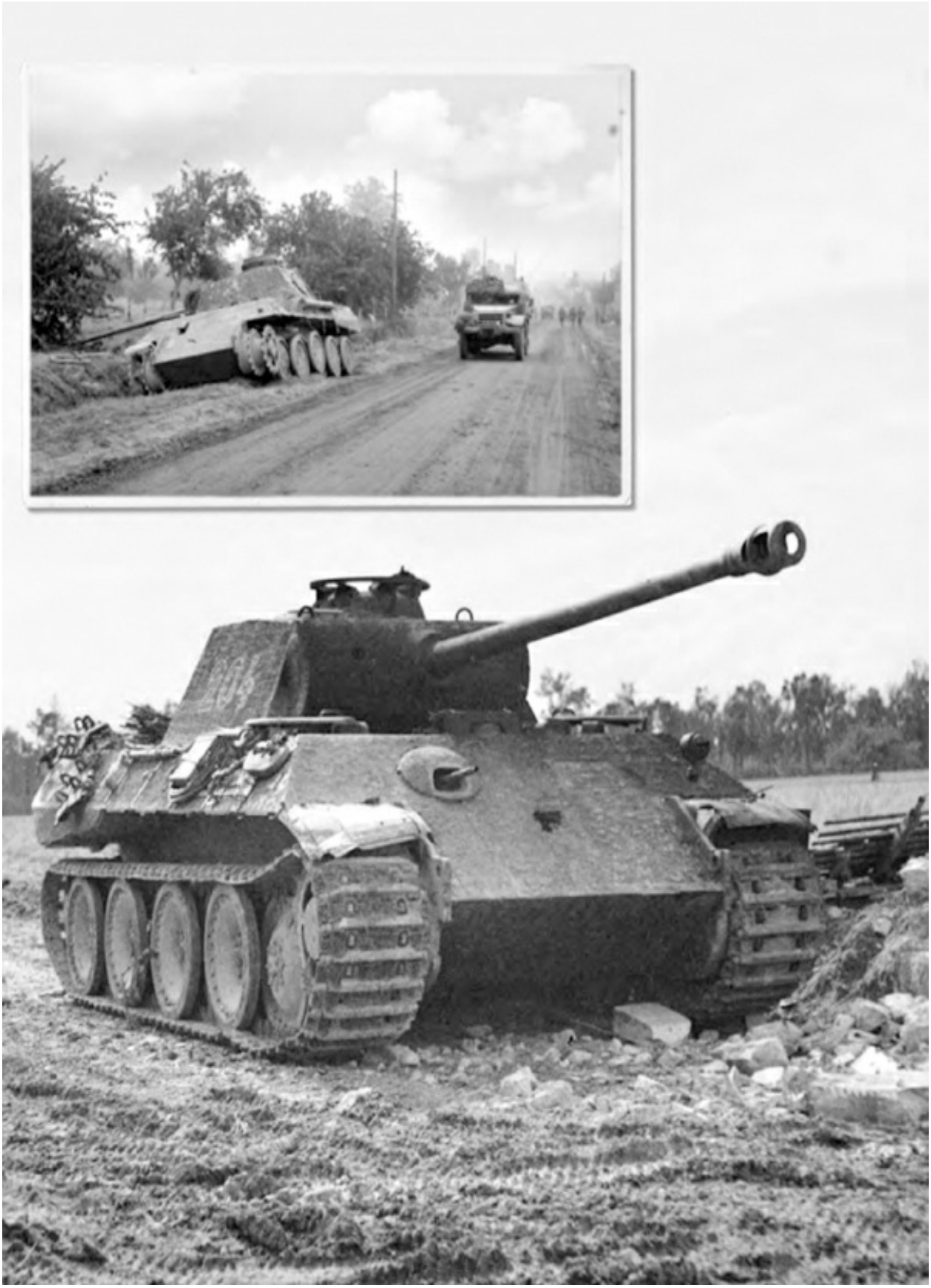
*** This figure is almost certainly incorrect and may represent combat-ready tanks. The battalion took over 8 command tanks for SS-Pz-Rgt 1 and received another 2 new vehicles in late 1943. In January 1944 a further 11 Panthers were handed over from Pz-Rgt 6 and 7 new tanks were allocated in February. The record-keeping practices of SS units were notorious and the true figure may have been closer to 68*

***This figure represents the complete regiment and the number of Panthers was probably less than 7*

Although of fairly poor quality this photograph of 2.Kompanie Panther ausf A models, taken when SS-Panzer-Regiment 12 was training in Belgium prior to the Normandy landings, is rarely published and provides a good indication of the appearance of the tanks of I.Abteilung. Of note is the very roughly-painted turret number. Tanks of this regiment are depicted on page 26 of the Camouflage and Markings section of this book.

Worn down by almost continual combat, Wünsche's command reported that on 2 August 1944 only seven Panthers were ready for immediate deployment.

In late August the remnant of 12.SS-Panzer-division, with just ten operational tanks, was ordered to hold open the northern side of the gap through which the survivors of 7.Armee were attempting to escape the Falaise Pocket.



A Panther ausf D photographed near Tourville on 16 July 1944. There is some convincing evidence that this tank may be the Panzerbefehlswagen numbered 219 of SS-Panzer-Regiment 12 shown on page 26.

Panther ausf A of 2.Kompanie, SS-Panzer-Regiment 12 photographed on 27 June 1944, probably in the Caen area. The tank's company number of 204 is clearly visisble on the turret side.

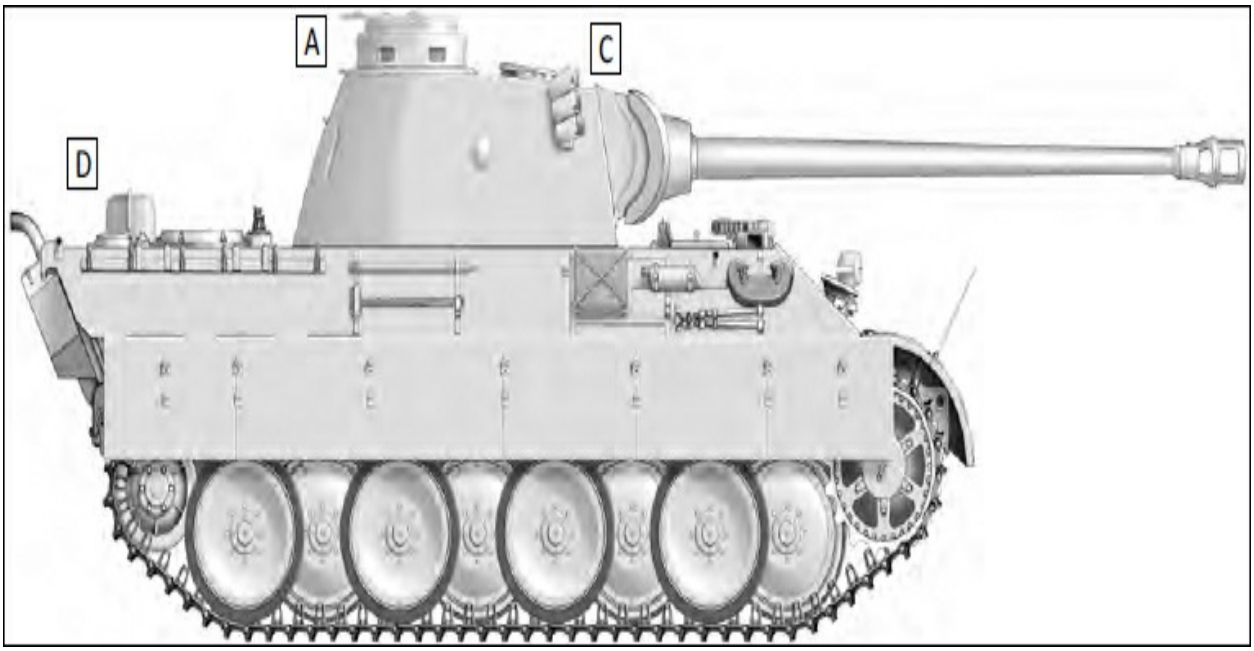
Notes

1. Sturm-Panzer-Abteilung 217 did not leave for the Normandy Front until late July 1944 and was not in combat before at least 7 August and it is not clear when the battalion was attached to Olboeter's Kampfgruppe. The divisional commander also had at his disposal an additional Kampfgruppe commanded by Hans Waldmüller consisting of parts of II.Abteilung, SS-Panzer-Regiment 12 and 1.Kompanie, SS-Panzerjäger-Abteilung 12.

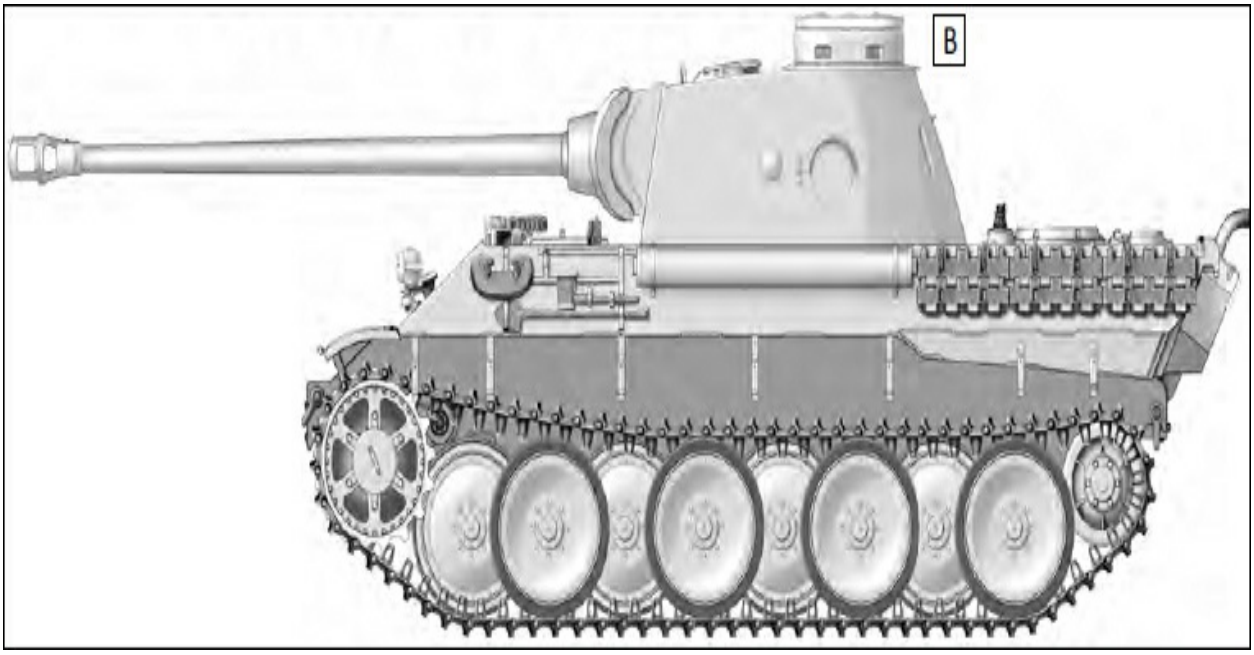
TECHNICAL DETAILS AND MODIFICATIONS

In May 1942 orders for the first production Panthers were placed with Maschinenfabrik Augsburg-Nürnberg (MAN), Daimler-Benz (DB), Maschinenfabrik Niedersachsen Hannover (MNH) and Henschel und Sohn. All these firms assembled complete vehicles except Henschel which received the turrets from Wegmann & Co at Kassel which were then mounted on a finished chassis at Henschel's assembly plant a short distance away. The company had also employed this arrangement with the production of the Tiger I. From the original order for 1,000 tanks, later reduced to 850, a total of twelve chassis were used as the first Bergepanther recovery vehicles. From January 1943, when the first tank left the assembly line, until May 1945, when the last vehicle was produced, the Panther was subject to several major re-designs and a number of modifications. These changes were sometimes introduced as economy measures but also as a means of increasing the Panther's combat effectiveness and to remedy technical problems that had been identified during trials and in the field. Although the time period covered by this study is quite limited, from June to August 1944, I have attempted to list earlier modifications which could have been seen on tanks operated during the Normandy battles, particularly the many Panther ausf D models which were still in service. I have, however, decided not to list any production modifications which were instigated from the beginning of August 1944 as it seems clear that the last deliveries of new tanks to units fighting in western France took place at about that time.

Panzerkampfwagen V Panther ausführung D



Pzkw V Panther ausf D assembled in mid-1943. The smoke candle dischargers were discontinued in June and the armoured pot was only installed between June and August. The newer bracket for the jack block, as shown on the Panther ausf A, was introduced in July although the cross-strap arrangement shown here was in use for some time after that.



Pzkw V Panther ausf D produced after June 1943. The rain channel over the turret communications port was introduced in April 1943 and a number of the 16-bolt road wheels, were reinforced with sixteen rivets between June and August.

The most distinctive feature of the Panther ausf D was the simple, cylindrical commander's cupola (A), from August 1943 fitted with a ring mount (B) to which the bracket for an anti-

aircraft machine gun could be fixed. The tank shown at top has the turret smoke candle dischargers (C) which were dropped from production in June 1943 and the armoured pot (D) covering the telescoping air intake tubes. These items are discussed further in the text. Note that the tank depicted in the left-hand view has two road wheels strengthened by the addition of sixteen rivets. These rivets were of roughly the same size as the bolts and are difficult to differentiate in contemporary photographs.

Notes

1. Translated as skirts or aprons, these plates were added to other tanks at about this time including the Pzkw IV and Pzkw III.

April 1943. Armoured plates of 5mm thickness, referred to as Schürzen (1), were mounted on the hull sides to offer greater protection against Russian antitank rifles which were capable, at close range, of penetrating the 40mm armour of the lower hull between the wheels and the overhang. This simple innovation in fact saved the Panther ausf D project at a time when it was suggested that production should be switched to the more heavily armoured Panther II, which was then on the drawing board. In subsequent tests these plates proven to be effective against heavier-calibre projectiles although they were never intended to protect the Panther from hollow charge rounds as is often stated.

May 1943. A rain channel was welded over the communications port on the turret left hand side and the escape hatch on the turret rear.

June 1943. In order to provided added structural strength, a rivet was added between each bolt of the 16-bolt wheels.

July 1943. The smoke candle dischargers which had been mounted on the turret sides towards the front were discontinued from production when it was found that the candles could be ignited by small arms fire. As an economy measure, a single Bosch headlight was mounted on the left-hand side of the glacis above the fender. Tanks produced up to that time were equipped with two headlights on either side of the glacis.

August 1943. The communications port on the left-hand side of the turret was dropped from production. Contrary to some accounts this port was not intended as a shell ejection aperture (1). A ring for an anti-aircraft machine gun was added to the commander’s cupola (2). Units in the field were also

ordered to effect this change at the same time. New road wheels with 24 retaining bolts around the outer edge replaced the earlier 16-bolt wheels. Although it was intended that the older wheels would eventually be replaced entirely, the 16-bolt wheels, and those with the re-enforcing rivets introduced in the previous June, can still be seen in photographs taken long after this date and many were fitted to the early production Panther ausf A models. On 24 August the assembly plants were informed that the required fording depth for the Panther would henceforth be reduced from 4 to 1.9 metres. This meant that the proposed telescoping air intake pipes, which would have allowed the tank to be completely submerged, would no longer be needed. In addition, the armoured pot covering the submersion gear on the hull rear deck, which had been introduced in June, was dropped from production. Very few tanks were provided with full sets of submersion equipment but those that were seem to have retained it and the armoured cover (3). A rain channel was welded over the sight apertures on the mantlet of the main gun.

September 1943. An anti-magnetic mine paste, referred to by its commercial name of Zimmerit, was applied to all vehicles before leaving the assembly plants. As just thirty-seven tanks were completed in September before production of the Panther ausf D was halted, it is probable that very few tanks would have received factory applied coatings. Six chevrons, or Stollen, were cast onto each track link to increase traction in ice and snow. Stocks of the older tracks were still used however and it is not uncommon to see both used together.

November 1943. Operational units were ordered to apply Zimmerit to those tanks which had not received a coat before leaving the factories (4).

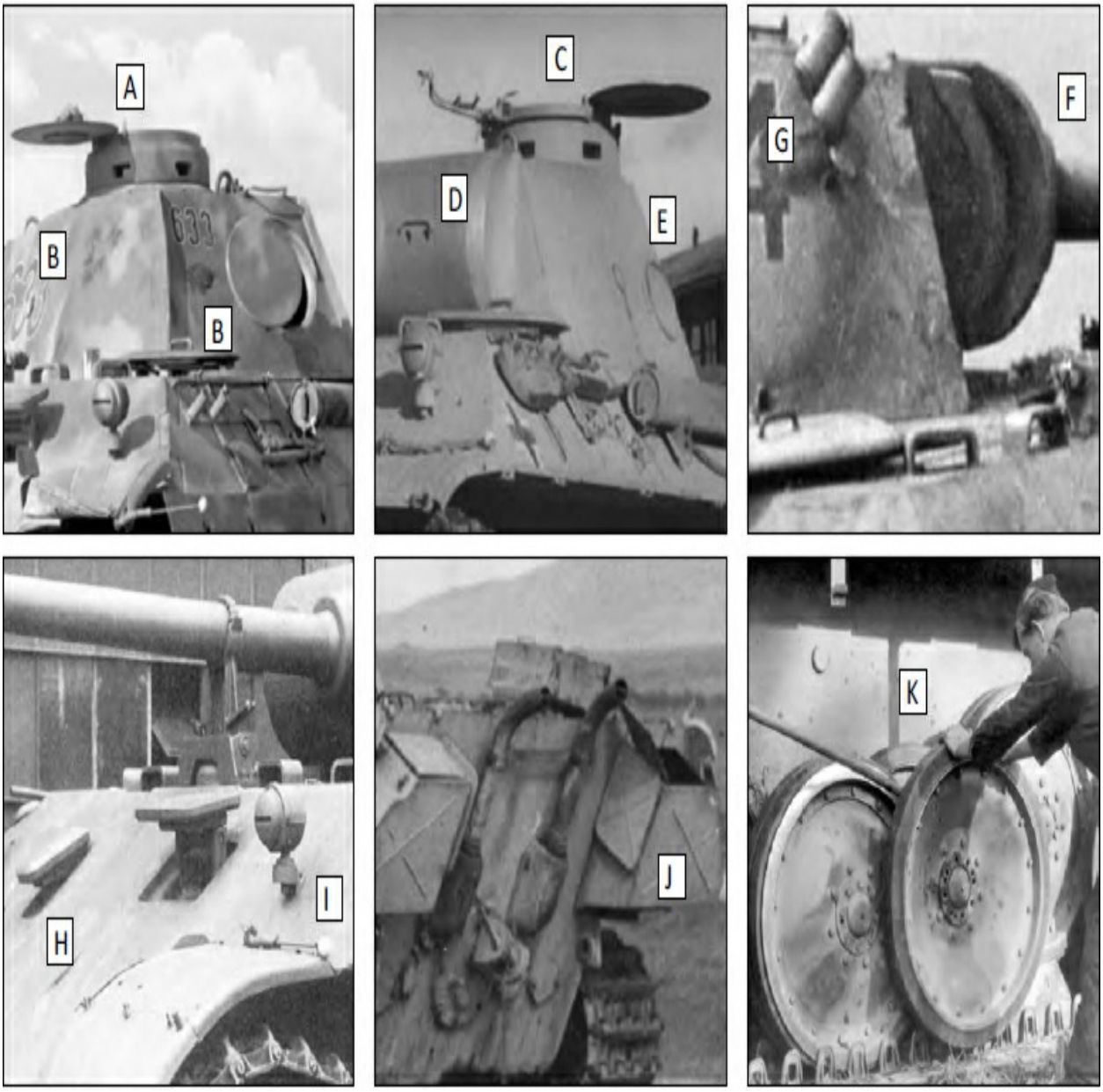
June 1944. Units were ordered to weld three sockets, or Pilzen, to the turret roof to accommodate the 2-ton Befehlskran. Also, beginning in June, orders were issued that a handle should be welded to the outside of the turret rear access hatch, a practice which in any case may have been going on for some time.

Notes

1. Spent 75mm shells were disposed of through the turret rear access hatch.
2. The gun was, of course, the standard MG 34.

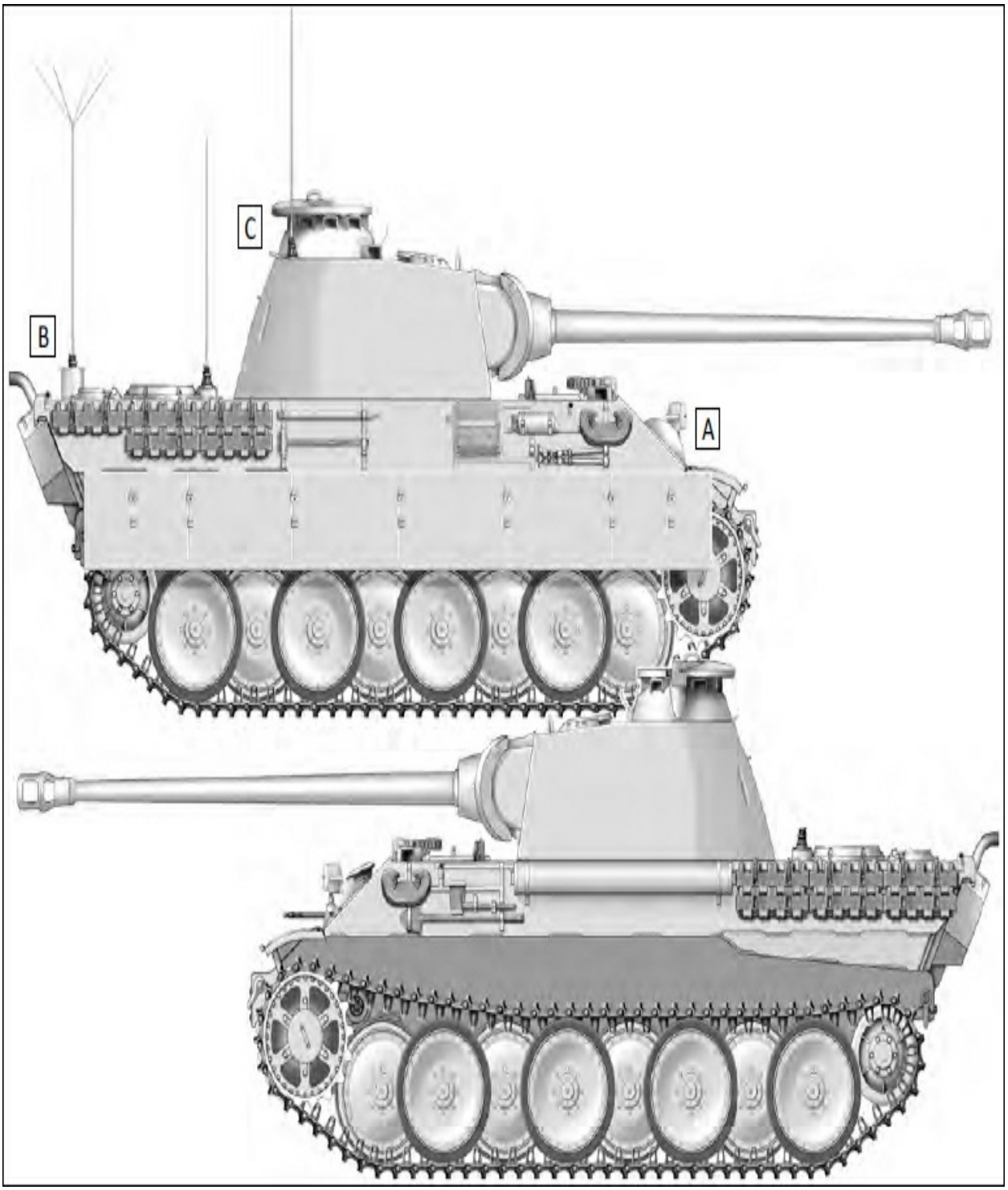
3. Trials with the army's 16 ton bridge proved it capable of supporting the Panther's weight, negating the need for complete submersion.

4. The use and application of Zimmerit paste is discussed in detail on page 62.



A) The early 'drum' cupola. B) The small pistol ports next to the rear access hatch and on the turret sides. C) The ring fitted to the commander's cupola complete with AA machine gun bracket. D) The apertures for the binocular with rain guard added. E) The communications port with, just visible, the rain channel. F) The gun mantlet of the Panther ausf D model. Compare this with our drawing and the later models shown on the following pages. G) The smoke candle discharger. Note that this example is damaged. H) The early hull machine-gun aperture, the so-called 'letter box' opening. I) The single Bosch headlight. J) Heat guards mounted on the inside of the stowage boxes. These were introduced from May 1943. K) The early, 16-bolt road wheels undergoing repairs.

Panzerkampfwagen V Panther ausführung A



Befehlspanzer V Panther ausf A based on a vehicle produced after December 1943 when the Kugelblende mount (A) was introduced into production. These command tanks were fitted with an auxiliary generator which necessitated the removal of the hull machine gun and reduced the number of 75mm rounds carried to sixty-four. An armoured cylinder on the rear

deck (B) protected the antenna base for the FuG 8 radio and an additional antenna base (C) was installed in the turret roof.

Pzkw V Panther ausf A produced after January when the turret side pistol ports were dropped from production. This tank is fitted with the 24-bolt road wheels introduced from August 1943. Note the squaredoff joints of the turret sides and front plate. All drawings here are shown without Zimmerit for the sake of clarity.

The need to constantly improve the Panther led to the development of the ausführung A model, the first of which left the assembly line in August 1943. The new version was based on the Panther ausf D chassis, with modifications that had been incorporated into production, and fitted with an improved turret. The hull machine gun was still operated from the rectangular port in the glacis, the so-called 'letter box' opening, which would not be replaced with the Kugelblende mounting until late November or early December 1943 (1). Although much of the new turret was externally similar, a number of important differences were incorporated and these serve as identifying features. The most important and obvious change was the inclusion of a completely re-designed cast cupola for the tank's commander which featured seven periscopes each protected by an armoured cowling. In addition, a single periscope for the loader was fitted into the turret roof behind the fume extractor. The interlocking joints of the turret front and side plates were now squared off, whereas those of the Panther ausf D had been dovetailed, and the cast sides behind the gun mantlet were reshaped to accommodate a new type of seal. These details can be seen in our drawing and also in the accompanying photographs. Production was undertaken by MAN, Daimler-Benz, MNH and Deutsche Maschinenfabrik, Duisburg (Demag) which may have assembled as few as fifty tanks (2). The firm of Henschel und Sohn was contracted to produce the Bergepanther version.

Notes

1) It was at one time thought that this modification was a distinguishing feature of the Panther ausf A; however, more than 600 examples of the new tank may have left the factories before its introduction.

2) Official records are no longer available and the generally accepted figures for Demag are based on an estimate. After February 1944 Demag switched to the manufacture of the Bergepanther recovery tank.

August 1943. The first Panther ausf A models leave the assembly plants. In the same month, operational units were ordered to replace the 16-bolt road wheels with the newer 24-bolt versions.

September 1943. It was ordered that a coat of Zimmerit anti-magnetic mine paste be applied to all vehicles before leaving the assembly plants. The exact date that this order was put into effect is unknown and photographs exist of vehicles completed at the beginning of October that do not have Zimmerit suggesting that some firms at least may have had difficulty obtaining

sufficient quantities of the paste.

November 1943. A ball mount for the hull machine gun, the Kugelblende, was incorporated into production. As the new mount contained a sight for the machine gun it was felt that the radio operator's forward facing periscope was now superfluous and it was no longer fitted. The binocular T.Z.F.12 gun sight was replaced by the monocular T.Z.F.12a version. Until supplies of single-aperture gun mantlets were available, the second, outer sight aperture was sealed with an armoured plug although these vehicles retained the wider rain channel. A number of tanks produced in November and December were fitted with a towing coupling bolted onto the hull rear plate along the lower edge below the engine access hatch. This was identical to the coupling fitted to the Bergepanther recovery vehicle. As this interfered with ground clearance it was soon dropped from production and although the number of tanks actually fitted with the coupling was small, most Panther ausf A models manufactured up to April 1944 had the necessary brackets and holes, the latter sealed with four bolts. Units in the field were ordered to apply Zimmerit to those tanks which had not received a coat before leaving the factories.

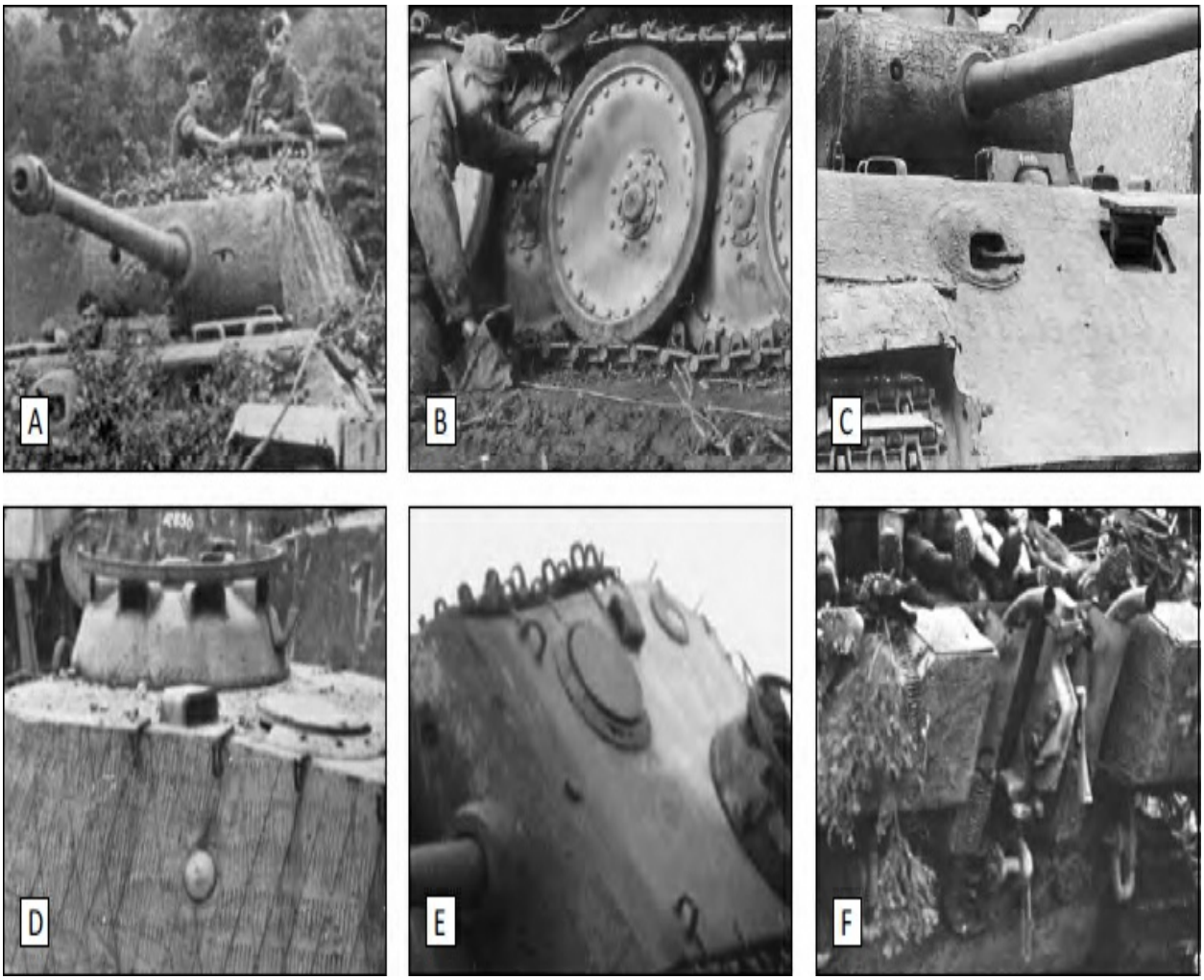
December 1943. The small pistol ports, referred to as MP Stopfen, on either side of the turret were dropped from production. It was intended that these be replaced by the Nahverteidigungswaffe, or close defence weapon, which was to be mounted in the turret roof, could be traversed through 360 degrees and was capable of firing smoke candles, grenades and flares. A hole was cut in the turret roof, to the right of the cupola, into which the

Nahverteidigungswaffe was Meant to be fitted but due to difficulties with supply none were available until March 1944 and the turrets of many Panther ausf A models assembled in February and March were instead fitted with a circular plate covering the hole and held in place by four bolts.

January 1944. Two cooling pipes were added to the engine exhaust manifold on the left hand side.

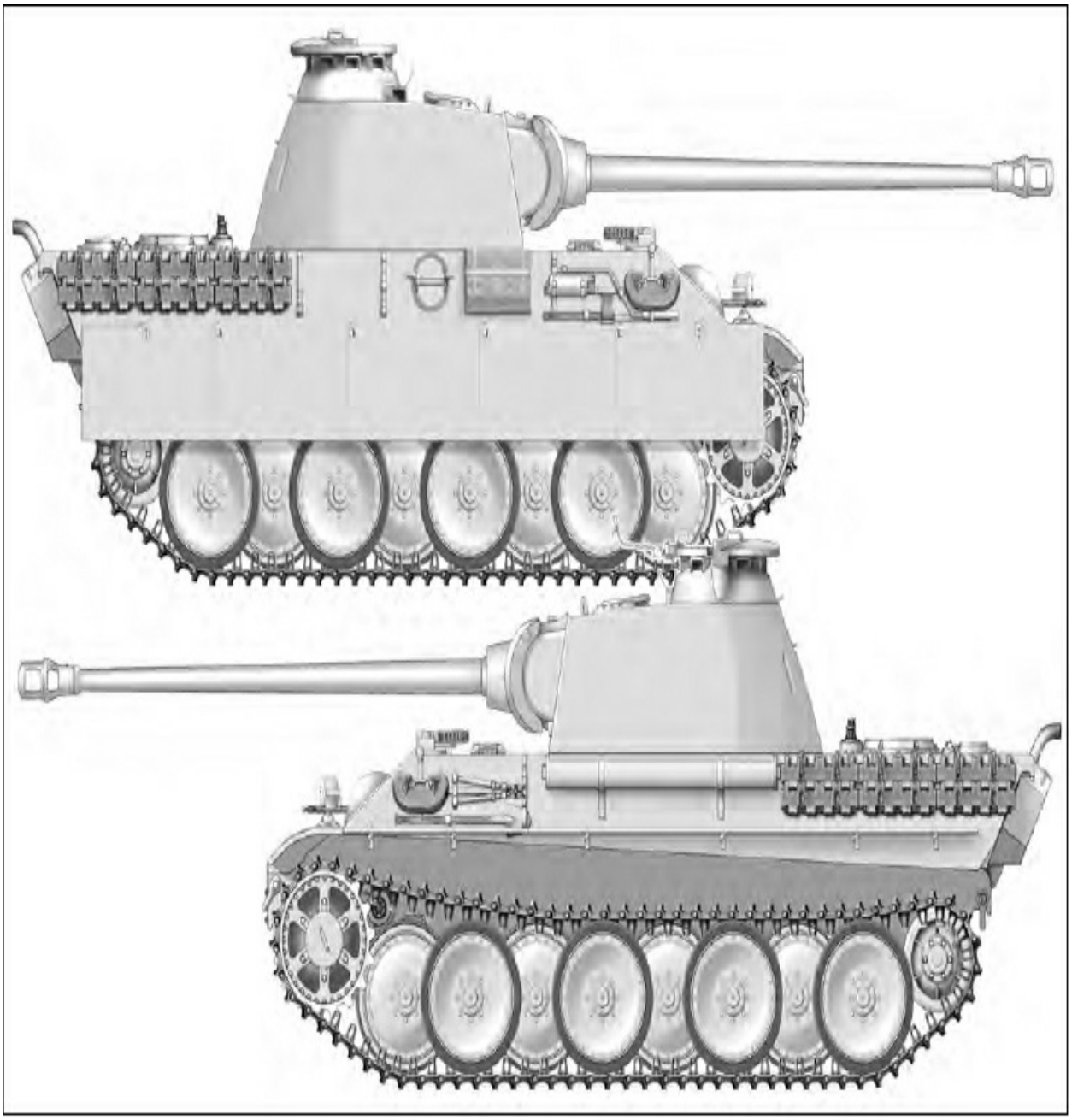
February 1944. A vertical mount for the 20-ton jack replaced the previous horizontal arrangement which held a 15-ton jack. Beginning in February, a towing coupling was welded to the engine access hatch on the hull rear plate although MNH Panthers were assembled until mid-April with the old access hatch.

June 1944. Three sockets, or Pilzen, were welded to the turret roof to accommodate the 2-ton Befehlskran jib boom. June 1944. As with the Panther ausf D tanks in service, orders were issued that a handle should be welded to the outside of the turret rear access hatch.



Three views of the cast commander's cupola introduced with the Panther ausf A, all showing the hatch in the open position. Note the v-shaped fixed sight in front of the foremost periscope. Above: A). The single aperture for the monocular gun of the gun mantlet fitted with a rain channel. B). The 24-bolt road wheels introduced into production in August 1943 and issued as replacements at the same time. C). The Kugelblende machine- gun mount and the driver's visor in the open position. D). The armoured cover for the loader's periscope on the turret roof and the side pistol port. Note the metal hooks welded to the turret and the unusual pattern of Zimmerit. E). The turret roof showing the Nahverteidigungswaffe installed behind the loader's periscope. F). The vertically-mounted jack. This is in fact a Panther ausf G, but the installation was identical.

Panzerkampfwagen V Panther ausführung A



Pzkw V Panther ausf G produced in late March 1944 without any modifications. The turret was identical to the Panther ausf A model.

Notes

1) The story of the Panther II falls outside the scope of this book and it is sufficient to mention here that it was under development at the same time as the Panther ausf D and its design would, as an economy measure, include parts that were interchangeable with the Tiger I.

When it was decided in May 1943 that the Panther II project was to be postponed many of its simplified design aspects would be incorporated into

the chassis of the next generation of the Panther (1).

The most distinctive feature of the Panther ausf G were the angled sides of the hull made up from single plates. The turret was the same as that used for the Panther ausf A, at least during the period of our study. Other important differences included -

The driver's and radio operator's hatches which were now hinged as opposed to the pivoting versions of the earlier tanks.

The driver's visor on the glacis was deleted and a periscope with armoured cover (A) was installed on the hull roof in front of the driver's hatch

The rear deck, including louvres and air intakes, was re-designed. This was in fact the same design used for the Panther II.

The single Bosch headlight was moved from the glacis to the left fender (B).

The two parallel cooling pipes on the left exhaust manifold were dropped form production

The tool stowage on the hull sides was revised as can be seen in our drawings

The hull Schürzen were now fixed to an extended fender which ran for much of the length of the hull sides (C).

Production of the Panther ausf G was undertaken by MAN, MNH and Daimler-Benz with the first two tanks leaving the factories in May 1944. As it seems almost certain that the last deliveries of any new Panthers made to units fighting in Normandy took place in the first week of August 1944, the only production modification that was likely to have been initiated was the adoption in May of welded armoured guards for the exhaust covers.

Pzkw V Panther ausf G of 1.Kompanie, SS-Panzer-Regiment 12 captured almost intact by Canadian troops at Bretteville-sur-Odon, about 15 kilometres south-east of Bayeux, on 9 June 1944. This Panther is a MAN-produced tank, built in March or April 1944 before the

introduction of the welded armoured exhaust covers. In his history of the Hitlerjugend division Hubert Meyer mentions that this tank was commanded by the commander of the company's third platoon.

Panzerbefehlswagen V Panther ausf G photographed at some time in 1944, although the debris guard over the gun mantlet identifies this as a post-August production model and therefore somewhat late for our study. The hinged, outward-opening hatches for the driver and radio operator are clearly visible here. The pattern of Zimmerit suggests that this tank was built by MAN.

Zimmerit

Notes

1. Despite my best efforts I have not been able to find any reference to the uses of Zimmerit prior to its application to armoured vehicles although, as mentioned here, it was commercially available prior to September 1943. I would be happy to hear from any reader who may have any information.

2. Most readers will be familiar with Polyvinyl Acetate as white PVA glue.

3. Most photographs of Panther ausf D tanks coated with Zimmerit, serving in both Russia and France in 1944, seem to indicate that the paste applied in a very rough, hurried manner, the pattern of ridges quite unlike those seen on later models.

4. Application of Zimmerit was suspended and then discontinued when it was claimed that the paste was causing, or at least aiding, fires. Interestingly the Allies assumed that Zimmerit was actually a method of camouflage and had no inkling as to its true purpose.

From late 1942, German infantry units were issued with anti-tank grenades referred to collectively as Hafthohlladung. Several could be carried by a single man and once attached to a metal surface the grenade was held in place by small but powerful magnets until the charge was detonated. The resulting explosion was sufficient to penetrate thin armour or destroy a tank’s tracks

effectively disabling it. So impressed were the Germans with the Hafthohlladung that they immediately asssumed that the western Allies and the Soviets in particular, whose tank hunting teams were already having great success with the weapons available to them, would soon field their own equivalents which would also utilise magnets. Quite obviously the Hafthohlladung would be useless if its magnetic properties could be effectively neutralised and after some experimentation it was decided that altering the flat, smooth surfaces of their own tanks would protect them from the enemies grenades. A commercially available paste developed by the Chemische Werke Zimmer AG of Berlin and marketed as Zimmerite, often spelled as Zimmerit, and was chosen to achieve the desired texture (1). The paste was composed mainly of Barium Sulphate and Polyvinyl Acetate (2) with the addition of an ochre pigment and Zinc Sulphide. The reaction of Barium Sulphate with Zinc Sulphide tends to produce a white colour which would have lightened the ochre pigment somewhat. As a binding agent, ordinary sawdust was added.

The paste was to be applied to all the vertical and sloped surfaces of tanks and assault guns, including the hull sides behind the wheels, to the height that an average man could reach, before the vehicles left the assembly plants. Moving parts and detachable items, such as hinges and tools, were not to be coated as it was expected that the paste would be quickly worn away. Officially, Zimmerit was not to be applied to either hull or turret Schürzen although photographic evidence shows that this order was frequently ignored. The application itself was quite complicated and required two coats and each coat needed to be left to cure for at least four hours. Once dry the paste became quite hard and it was then heat-treated with a blowtorch and, with special tools, fashioned into a pattern of ridges. It was the resulting ridges which denied the magnets the flat surface they needed, the paste itself having no inherent anti-magnetic properties.

The application of Zimmerit was instituted in September 1943, although the exact date is not known and may have differed from one assembly plant to another. As just thirty-seven Panther ausf D models left the factories before production was halted in that same month it is unlikely that many received a

coat at the assembly plants (3). The majority of Panther ausf A models were manufactured between September 1943 and July 1944, which would suggest that almost all would have been coated with Zimmerit during the assembly phase and with Panther ausf G production beginning in March 1944, the first tanks reaching front line units in April, as many as 1,600 production vehicles could have been coated in Zimmerit before 9 September 1944 when the practice ceased (4). It is very unlikely that any Panther tank in service in June 1944 would not have been coated with Zimmerit. For our purposes the pattern of ridges can, in most case, identify the manufacturer of a particular tank although it should be remembered that exceptions exist to every rule and the following should be taken as a guide only.

Zimmerit

MAN Panthers. The Zimmerit coating (A) was typically made up of short vertical strokes applied with a roller which gave a very orderly and consistent

appearance. Over the short strokes or ridges, vertical and horizontal lines forming a grid of about 10 centimetres square were worked into the paste with a pallet knife or trowel. These longer lines were less orderly and could sometimes be applied diagonally, particularly on mudguards and stowage bins but also on the turret sides. On Panther ausf G tanks this pattern was strictly adhered to with different vehicles displaying the same number of lines on turret sides, hull fronts and other surfaces. Another similar pattern was used, employing a slightly larger roller which left a thicker coat of Zimmerit and necessitated a grid of approximately 15 centimetres square. That this pattern does not seem to have been applied to surfaces such as mudguards may suggest that it was a later version. Photographic evidence suggests that Zimmerit was not applied to the commander's cupola on MAN vehicles.

MNH Panthers. The coating applied to Panther ausf A models featured a flat, rather smooth application broken up by deeply scored vertical and horizontal lines which formed a grid (B). As a general rule Zimmerit was not applied to the mudguards and even the stowage bins were left untreated on some vehicles. Although rare, there are instances of this pattern being extended to the commander's cupola. In July 1944 the firm switched to production of the Panther ausf G and the pattern was changed to horizontal strokes applied with a trowel, the so-called 'ladder pattern'. Over this 'ladder', a grid of approximately 10 centimetres square was inscribed with a trowel or similar tool.

Daimler-Benz Panthers. This pattern was characterised by a rather flat application which was afterwards roughened with short diagonal strokes and photographs show that the roughened Zimmerit was sometimes applied to the commander's cupola (C). The surface was then broken up by vertical and horizontal lines, again forming a grid, although the grid pattern did not extend to the cupola. The size of the grid varied and could be quite roughly applied, the lines often straying off course. There is some evidence that Daimler-Benz adopted this pattern solely to distinguish their Panthers from those produced by the company's main rival, MAN. With the exception of the initial rough application this pattern was very similar to that seen on Panther ausf A vehicles produced by MNH.

Demag Panthers. This pattern was made up of horizontal strokes applied with a trowel and separated by deep vertical lines (D). Some vehicles also featured horizontal lines which then formed a grid and this has led to the Demag patterns being incorrectly assumed to be a version of the MAN Zimmerit.

Many photographs exist of tanks coated in patterns which do not conform to those listed above and it is common to read of ‘field applied’ Zimmerit as a means of explaining the many anomalies. However, when one considers how complicated the process of covering a complete armoured vehicle was, requiring 160 kilograms of paste for a single Panther, with long waiting periods between each step and the use of a blow torch with what was essentially a flammable compound, it seems likely that older or damaged tanks received their coating of Zimmerit when they were withdrawn from the front for repairs at larger workshops far in the rear.

PRODUCT CONTACT LIST

Dragon Models Ltd
B1-10/F., 603-609 Castle Peak Rd.
Kong Nam Industrial Building
Tsuen Wan, N. T., Hong Kong.
www.dragon-models.com

Dragon USA
1315 John Reed Ct, City of Industry,
CA 91745, USA
www.dragonmodelsusa.com

Tamiya Inc
Shizuoka City, Japan
www.tamiya.com

Airfix
www.airfix.com/uk-en/

Revell
www.revell.com/

Royal Model
Via E. Montale, 19-95030 Pedara, Italy
www.royalmodel.com

Italeri S.p.A.
via Pradazzo 6/b
40012 Calderara di Reno
Bologna, Italy
www.italeri.com

Jordi Rubio
Carrer de Còrsega, 625, 08025 Barcelona,
Spain
www.Jordirubio.com/en

Archer Fine Transfers
PO Box 1277
Youngsville, NC 27596
USA
www.archertransfers.com

Star Decals
www.star-decals.net
Formerly Bison Decals

Hauler
Jan Sobotka
Moravská 38
620 00 Brno
Czech Republic
www.hauler.cz

Voyager
Room 501, No.411 4th Village
SPC Jinshan District
Shanghai 200540
P.R.China
www.voyagermodel.com

Griffon Model
Suite 501, Bldg 01, 418 Middle Longpan Road, Nanjing, China
www.griffonmodel.com

Aber
ul. Jalowcowa 15, 40-750 Katowice, Poland
www.aber.net.pl

E.T. Models
www.etmodeller.com

Friulmodel
H 8142. Urhida, Nefelejcs u. 2., Hungary
www.friulmodel.hu

Modelkasten
Chiyoda-ku Kanda, Nishiki-Cho 1-7, Tokyo, Japan
www.modelkasten.com
Very difficult to navigate but worthwhile

Dan Taylor Modelworks
55 Town Hill,
West Malling,
Kent, ME19 6QL
United Kingdom
www.dantaylormodelworks.com

ROCHM Model
www.rochmmodel.com
rochmmodel@gmail.com

Eduard Model Accessories
Mirova 170, 435 21 Obrnice
Czech Republic

www.eduard.com

Model Artisan Mori
Yasutsugu Mori
Maison Suiryu 302, Kunoshiro-cho 1-10
Yokkaichi-City, Mie 510-0072, Japan
www.artisanmori.web.fc2.com

RB Model
Powstancow Wlkp.29B
64-360 Zbaszyn
Poland
www.rbmodel.com

M Workshop Singapore
91 Bencoolen St Sunshine Plaza01-58
Singapore
www.themworkshop.com

Zvezda (Zvezda-America)
www.zvezda-usa.com

Peddinghaus Decals
www.decals.guenstigergeht.net

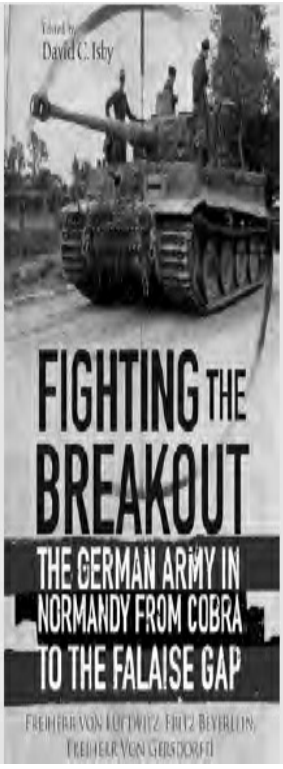
Black Dog
Petr Polanka
Letecká 549
Libèice nad Vltavou
252 66, Czech Republic
www.blackdog.cz

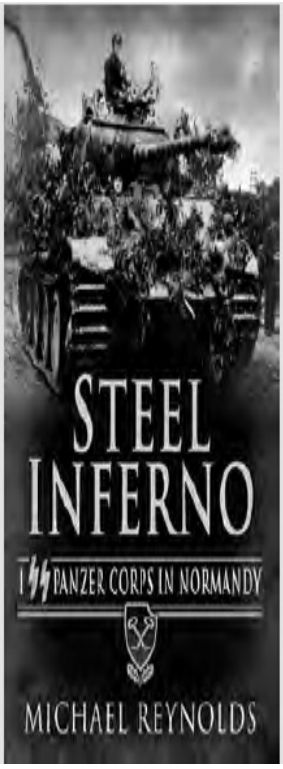
Tank Workshop
345 Wynbrook Dr
McDonough GA 30253
USA
www.tankworkshop.com

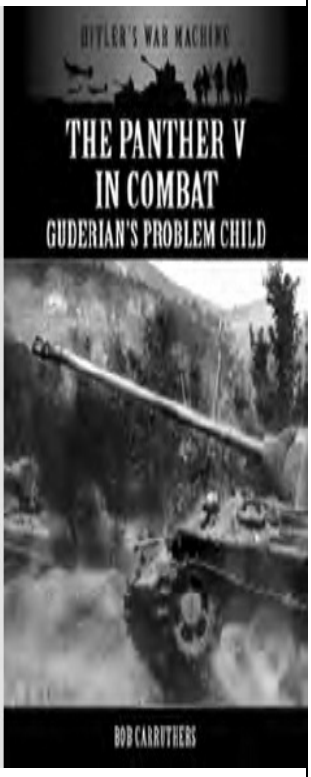
In compiling this book I have tried to provide the general reader with a guide to understanding what can at times appear a bewildering subject and also to inspire modellers to create a scale representation of what was, surely, one of the most important armoured fighting vehicles of the past century. In compiling the unit histories I referred extensively to Eric Lefévre's *Panzers in Normandy Then and Now, Panzers and the Battle for Normandy* by Georges Bernage and *Rückmarsch The German Retreat from Normandy* by Jean Paul Pallud. I also drew on my research for *A Sound Like Thunder* which I wrote in 2013 and *Panzers in the Bocage*, written by my friend Karl Berne. No book on the Panther tank could be written without reference to *Germany's Panther, The Quest for Combat Supremacy* written by the late Thomas L. Jentz with plan drawings by Hilary L. Doyle. Another invaluable resource is Thomas Jentz's *Panzertruppen* books which I would recommend to any reader

with an interest in German armour. I should also acknowledge the contributors to the Axis History and the Feldgrau forums, especially Martin Block and the late Ron Klages whose research on unit histories and vehicle allocations would fill many volumes and also the contributors to Brett Green's Missing Lynx discussion forum. I would like to thank the modellers who graciously allowed me to publish the images of their work and Rupert Harding and Stephen Chumbley at Pen & Sword for their advice, assistance and above all patience. Of the product manufacturers I must make special mention of Roberto Reale of Royal Model, Sheng Hui of ROCHM, Jan Zdiarsky from Eduard Accessories and Freddie Leung of Dragon Models who all helped enormously. As always, I am indebted to Karl Berne, Valeri Polokov and J.Howard Parker for their invaluable assistance with the photographs and period insignia.

FURTHER READING







The aim of this innovative new series is to provide modelmakers and tank enthusiasts with a new standard of primarily visual reference of both full-size tanks and their scale models. Each book will contain detailed technical information imparted through drawings and photographs while the meticulously researched full-colour profiles will provide a complete reference for paint schemes and markings. In addition every volume of the TankCraft series will feature summaries of design histories and operational careers, and reviews of available kits. Each book is devoted to an iconic tank type – chosen for its popularity as a modelling subject – and the series will provide coverage across a range of different criteria, showcasing the best of the world's tank types and providing invaluable insight and guidance for modelmakers.

Number 1 in the TankCraft series

TIGER I AND TIGER II TANKS

GERMAN ARMY AND WAFFEN SS
EASTERN FRONT 1944

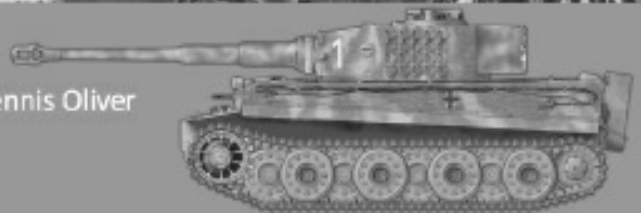
Dennis Oliver

In spite of the relatively small numbers produced, the Tiger I and Tiger II tanks are arguably the most famous armoured fighting vehicles of the Second World War. This book, the first in the TankCraft series, uses archive photos and extensively researched colour illustrations to examine the tanks and units of the German Army and Waffen-SS heavy Panzer formations that attempted to hold back the Red Army during 1944. In addition the book features a gallery of beautifully constructed and painted models and a showcase of available model kits and aftermarket products in various scales. Technical details as well as modifications introduced during production and in the field are also examined, providing everything the modeller needs to recreate an accurate representation of the tanks that fought from the snow covered fields of Byelorussia and the Ukraine, through the Baltic States and into Poland and Hungary.

TIGER I and TIGER II TANKS

TANK CRAFT

GERMAN ARMY AND WAFFEN-SS
EASTERN FRONT 1944



Dennis Oliver

A Panther ausf A of I.Abteilung, Panzer-Regiment 6. This tank was disabled by US Army units on 11 July 1944 near Le Dèzert, a small town on the St. Lô-Carentan road. This vehicle is shown and discussed further on page 18 of the illustration section. The Panther in the foreground has the metal bracket on the rear of the hull deck on the right hand side as described on page 19 and the spare wheel with its specially constructed support on the left. Both these fixtures were field modifications which were common, but certainly not universal, to the Panthers of I.Abteilung.